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FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
LIFESCI' ENTERED AT 13:17:17 ON 09 DEC 2004
L1        628423 S PEPTIDASE? OR PROTEINASE? OR PROTEASE?
L2        232488 S HUMAN AND L1
L3          1461 S ZINC(A) METALLOPROTEASE?
L4          3232 S ZINC AND L2
L5       6823002 S CLON? OR EXPRESS? OR RECOMBINANT
L6          1449 S L4 AND L5
L7          4633 S MATRIXIN OR HEMOPEXIN
L8            52 S L6 AND L7
L9            31 DUP REM L8 (21 DUPLICATES REMOVED)
L10         6055 S BRAIN (A)CANCER
L11            1 S L6 AND L10
L12          924 S ZINC (A)L1
L13            0 S L12 AND L10
L14            1 S L5 AND L1`2
L15          169 S L5 AND L12
L16            3 S L7 AND L15
L17            3 DUP REM L16 (0 DUPLICATES REMOVED)
L18           87 DUP REM L15 (82 DUPLICATES REMOVED)
                E HILLMAN J L/AU
L19          484 S E3
                E BANDMAN O/AU
L20          845 S E3-E7
                E TANG Y T/AU
L21          446 S E3
                E AZIMZAI Y/AU
L22          291 S E3-E5
                E YUE H/AU
L23          485 S E3
                E BAUGHN M R/AU
L24          757 S E3-E6
                E LU D A M/AU
L25          169 S E3
L26         2086 S L19 OR L20 OR L21 OR L22 OR L23 OR L24 OR L25
L27            0 S L6 AND L26
L28           61 S L2 AND L26
L29           43 DUP REM L28 (18 DUPLICATES REMOVED)

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TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS	5	NOV 18	Current-awareness alerts, saved answer sets, and current search transcripts to be affected by CERAB, COMPUAB, ELCOM, and SOLIDSTATE reloads
NEWS	6	NOV 30	PHAR reloaded with additional data
NEWS	7	DEC 01	LISA now available on STN

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	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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FILE 'LIFESCI' ENTERED AT 13:17:17 ON 09 DEC 2004
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=> s peptidase? or proteinase? or protease?
L1       628423 PEPTIDASE? OR PROTEINASE? OR PROTEASE?

=> s human and l1
L2       232488 HUMAN AND L1

=> s zinc(a) metalloprotease?
L3         1461 ZINC(A) METALLOPROTEASE?

=> s zinc and l2
L4         3232 ZINC AND L2

=> s clon? or express? or recombinant
   3 FILES SEARCHED...
L5      6823002 CLON? OR EXPRESS? OR RECOMBINANT

=> s l4 and l5
L6         1449 L4 AND L5

=> s matrixin or hemopexin
L7         4633 MATRIXIN OR HEMOPEXIN

=> s l6 and l7
L8           52 L6 AND L7

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9           31 DUP REM L8 (21 DUPLICATES REMOVED)

=> d 1-31 ibib ab

L9   ANSWER 1 OF 31  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2004:838610  HCAPLUS
DOCUMENT NUMBER:          141:312238
TITLE:                    DNA microarray analysis of gene expression
                          in the diagnosis of estrogen receptor positive- and
                          negative-breast cancer
INVENTOR(S):              Erlander, Mark G.; Ma, Xiao-Jun; Wang, Wei; Wittliff,
                          James L.
PATENT ASSIGNEE(S):       Arcturus Bioscience, Inc., USA
SOURCE:                   PCT Int. Appl., 226 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:
```

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004079014	A2	20040916	WO 2002-XA2004006736	20040304

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, CN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2004079014	A2	20040916	WO 2004-US6736	20040304

W: AE, AE, AG, AL, AL, AM, AM, AM, AT, AT, AU, AZ, AZ, BA, BB, BG, BG, BR, BR, BW, BY, BY, BZ, BZ, CA, CH, CN, CN, CO, CO, CR, CR, CU, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EC, EE, EE, EG, ES, ES, FI, FI, GB, GD, GE, GE, GH, GM, HR, HR, HU, HU, ID, IL, IN, IS, JP, JP, KE, KE, KG, KG, KP, KP, KP, KR, KR, KZ, KZ, KZ, LC, LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MX, MZ, MZ, NA, NI

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:	US 2003-451942P	P	20030304
	WO 2004-US6736	A	20040304

AB The invention relates to the identification and use of gene **expression** profiles, or patterns, suitable for identification of populations that are pos. and neg. for estrogen receptor **expression**. The gene **expression** profiles may be embodied in nucleic acid **expression**, protein **expression**, or other **expression** formats, and may be used in the study and/or diagnosis of cells and tissue in breast cancer as well as for the study and/or determination of prognosis of a patient, including breast cancer survival.

L9 ANSWER 2 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	2004:610028 HCAPLUS
DOCUMENT NUMBER:	141:150947
TITLE:	Affinity fishing for ligands and protein receptors by an efficient process involving protein mixtures and ligand libraries
INVENTOR(S):	St. Hilaire, Phaedria Marie; Yin, Haifeng; Surve, Sheryl; Wenckens, Martin
PATENT ASSIGNEE(S):	Carlsberg A/S, Den.
SOURCE:	PCT Int. Appl., 172 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004062553	A2	20040729	WO 2004-DK23	20040116

W: AE, AE, AG, AL, AL, AM, AM, AM, AT, AT, AU, AU, AZ, AZ, BA, BB, BG, BG, BR, BR, BW, BY, BY, BZ, BZ, CA, CH, CN, CN, CO, CO, CR, CR, CU, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EC, EE, EE, EG, ES, ES, FI, FI, GB, GD, GE, GE, GH, GH, GH, GM, HR, HR, HU, HU,

ID, IL, IN, IS, JP, JP, KE, KE, KG, KG, KP, KP, KP, KR, KR, KZ, KZ, KZ, LC, LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MX, MZ

US 2004142379 A1 20040722 US 2003-346737 20030116

PRIORITY APPLN. INFO.: US 2003-346737 A 20030116
DK 2003-749 A 20030519

AB The invention provides putative "drugable" protein targets and actively binding ligands identified in an efficient and reproducible process by determining the affinity of protein mixts. to libraries of ligand compds. of defined size and composition The libraries are used to isolate and identify previously unknown corresponding protein-ligand binding pairs from a mixture of proteins and a library of compds., and are particularly useful to identify differentially selective protein-ligand binding pairs, for example, representing a single physiol. state or several varied but related states, such as disease vs. normal conditions. The invention also provides processes for identifying such protein-ligand binding pairs.

L9 ANSWER 3 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:355085 HCAPLUS
DOCUMENT NUMBER: 140:369944
TITLE: **Human** tissue-specific housekeeping genes identified by **expression** profiling
INVENTOR(S): Aburatani, Hiroyuki; Yamamoto, Shogo
PATENT ASSIGNEE(S): NGK Insulators, Ltd., Japan
SOURCE: PCT Int. Appl., 372 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004035785	A1	20040429	WO 2002-JP10753	20021016

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2004229233 A1 20041118 US 2003-684422 20031015

PRIORITY APPLN. INFO.: US 2002-418614P P 20021016
WO 2002-JP10753 W 20021016

AB Housekeeping genes commonly **expressed** in 35 different **human** tissues, oligonucleotide probes and DNA microarrays containing them, are disclosed.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 31 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2003-10497 BIOTECHDS
TITLE: Novel crystalline form of a polypeptide corresponding to the catalytic domain of matrix metalloproteinase 9 protein, useful for selecting or designing chemical modulators which are used for treating diabetes, cancer, arthritis; vector-mediated **recombinant** protein gene transfer and **expression** in host cell for use in osteoarthritis, atherosclerosis, restenosis, periodontitis, multiple sclerosis, glomerulonephritis, graft-versus-host disease and inflammation therapy

AUTHOR: JEPSON H; MINSHULL C; PAUPTIT R; ROWSELL S
PATENT ASSIGNEE: ASTRAZENECA AB
PATENT INFO: WO 2003002729 9 Jan 2003
APPLICATION INFO: WO 2002-SE1266 24 Jun 2002
PRIORITY INFO: SE 2001-2298 27 Jun 2001; SE 2001-2298 27 Jun 2001
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2003-201502 [19]
AB DERWENT ABSTRACT:

NOVELTY - A crystalline form (I) of a polypeptide corresponding to the catalytic domain of matrix metalloproteinase9 (MMP9) protein, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) a crystalline form (II) of a polypeptide corresponding to catalytic domain of MMP9 in complex with an MMP9 inhibitor compound; (2) a crystalline form (III) of a polypeptide corresponding to active site binding region MMP9 protein, where the active site binding region amino acid residues are identical or equivalent to the active site binding region amino acid residues of MMP9 as given in specification, and the shape of the active site binding region is defined by the atomic coordinates (AC1) of wild type MMP9 construct in complex with a reverse hydroxymate compound as given in specification, or the atomic coordinates (AC2) of MMP9 mutant (E402Q) construct in complex with the reverse hydroxymate compound, as given in specification, or the equivalent coordinates of AC1 or AC2; (3) determining or designing (M1) the three-dimensional structure a crystal form of MMP9 by difference Fourier or molecular replacement using atomic coordinates first MMP9 crystal to model the structure a second MMP9 crystal, where the active site binding region amino acid residues of the first MMP9 crystal are identical or equivalent to the active site binding region amino acid residues of MMP9 as given in specification, and the shape of the active site binding region of the first MMP9 crystal is defined by AC1 or AC2 or its equivalent coordinates; (4) an MMP protein designed by (M1); (5) selecting or designing (M2) chemical modulator of MMP9 by selecting or designing a modulator with a three-dimensional structure that fix into the MMP9 active site binding region; and (6) a modulator (IV) of MMP9 selected or designed by (M2), or its salt are in vivo hydrolyzable ester.

ACTIVITY - Cytostatic; Antiarthritic; Osteopathic; Antiatherosclerotic; Vasotropic; Neuroprotective; Nephrotropic; Antiinflammatory; Antidiabetic; Immunosuppressive. No biological data is given.

MECHANISM OF ACTION - MMP9 modulator (claimed).

USE - (IV) is useful for treating a metalloproteinase mediated disease or condition in a warm-blooded animal (claimed). (I) is useful for determining the three-dimensional structure to high resolution. The three-dimensional structure of the MMP9 catalytic domain, is useful for rational drug design, and the atomic coordinates of the catalytic domain of MMP9 is useful for modeling the structure of second MMP9 crystal, and for selecting or designing chemical modulators (preferably inhibitors) of MMP9. (IV) is preferably useful for treating metalloproteinase mediated disease or condition such as tumor growth and metastasis in cancer, arthritis, and osteoarthritis, atherosclerosis, restenosis, periodontitis, multiple sclerosis, glomerulonephritis, graft-versus-host disease, non-insulin dependent diabetes, etc.

EXAMPLE - Catalytic domain of **human** matrix metalloproteinase 9 (MMP9) was **cloned** so that the fibronectin type II-like domains which occur as an insert within the catalytic domain sequence were deleted. The remaining catalytic domain fragment containing residues 107-216 was fused to residues 391-443 by overlapping polymerase chain reaction (PCR). The 5' primer introduced an ATG start codon directly upstream of the phenylalanine and a stop codon was introduced, via the 3' primer, after residue 443 to prevent translation of the **hemopexin**-like domains. An inactive mutant of this domain was created by site directed mutagenesis, such that the glutamate (GAG) at position 402 of the full-length cDNA was mutated to give a glutamine

(CAG). The product was **cloned** into T7 **expression** vector and transformed into Escherichia coli BL21 (DE3). This was grown up to log phase and induced to **express** the 18kDa MMP9 catalytic domain protein. Following **expression** in E. coli, MMP9 (107-216,391-443) was mainly located in the inclusion body fraction. The E. coli were harvested, washed and lysed and centrifuged to isolate the insoluble protein. The insoluble protein was then suspended in 6 M urea to solubilize the protein. To generate active MMP9 (107-216,391-443) the solubilized material was dialyzed sequentially versus 4M, 1 M and 0 M urea. Crystallization of this material after purification resulted in disordered crystals and analysis of the protein using mass spectrometry indicated heterogeneity at the N-terminus. It was found that the addition of acetohydroxamic acid in the refold buffers inhibited auto-proteolysis of the N-terminus of the protein. When crystallization of the protein was carried out it was found that where no acetohydroxamic acid was added during refolding disordered crystals formed whereas when acetohydroxamic was added the crystals were well ordered. Post dialysis, the protein was subjected to **zinc** chelate chromatography which selectively bound the MMP9 catalytic domain. A further chromatography step was then carried out using the tripeptide Pro-Leu-Gly bound to sepharose which bound correctly folded MMP9 catalytic domain. The protein was then eluted by addition of an MMP9 inhibitor. **Expression** and refolding of the (E402Q)MMP9(107-216,391-443) construct was carried out as for the wild type construct except that no acetohydroxamic acid was added to the refold buffers. After refolding, the enzyme was purified via **zinc** chelate chromatography followed by a gel filtration step. Crystallization of MMP9 catalytic domain was carried out as follows. The MMP9:reverse hydroxamate inhibitor complexes were crystallized at 15 degreesC by hanging-drop vapor diffusion. For crystallization of the wild-type complex, the enzyme inhibitor complex was purified. The crystallization drops contained a 1:1 mixture of purified complex solution (0.55 mg/ml protein and 0.5 mM inhibitor solution concentration to 4 mg/ml in 20 mM Tris-HCl pH 7.5, 2 mM CaCl2, 50 mM NaCl) and reservoir buffer (3.6 M NaCl, 0.1 M Hepes pH 7.5). For crystallization of the mutant complex, the protein was concentrated to 4 mg/ml solution (in 20 mM Tris-HCl pH 7.5, 50 mM NaCl), 5 mM inhibitor was then added to this solution and the complex was incubated on ice for 30 minutes prior to setting up crystallization trails. The drops contained a 1:1 mixture of complex solution and reservoir buffer (2.6-2.8 M NaCl, 0.1 M Hepes pH 9.0). The wild type and mutant crystals were isomorphous and belonged to space group P41212 with unit cell dimensions a = b = 56Angstrom and c = 263Angstrom, and contain two molecules per crystal asymmetric unit.(227 pages)

L9 ANSWER 5 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:837249 HCAPLUS
DOCUMENT NUMBER: 139:333090
TITLE: Matrix metalloproteinase-12 from **human** and mouse and their antimicrobial C-terminal peptides, and related methods and compositions for preventing and treating microbial infections
INVENTOR(S): Shapiro, Steven D.; Hartzell, William O.
PATENT ASSIGNEE(S): The Brigham and Women's Hospital, Inc., USA
SOURCE: PCT Int. Appl., 126 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003087325	A2	20031023	WO 2003-US10911	20030408
WO 2003087325	A3	20040415		

W: AU, CA, JP
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR

US 2003235577 A1 20031225 US 2003-409643 20030408
PRIORITY APPLN. INFO.: US 2002-370649P P 20020408

AB The invention involves administration of matrix metalloproteinase-12 (MMP-12, also known as macrophage elastase) polypeptides and nucleic acids (MMPAP-12 is used to refer both MMP-12 polypeptides and nucleic acids) for the treatment or prevention of infectious disease associated with microorganisms in subjects. MMP-12 is a 54 kDa protein that consists of three sep. domains, a proenzyme amino terminal domain, a **zinc** binding catalytic domain (also known as **protease** domain), and a **hemopexin** like carboxy terminal domain. During the process of activation, MMP-12 undergoes cleavage of the amino terminal domain for activation of the enzymic domain, which then cleave and release C-terminal domain autolytically. The present invention has shown the antimicrobial activity of **human** and mouse MMP-12, in particular, their 20-22 amino acid C-terminal peptides, against both gram pos. and gram neg. bacteria. This antimicrobial effect of MMP-12, which makes it unique from the other members of the MMP family, is shown at a protein, cellular, in vitro, and in vivo levels. The MMP-12 C-terminal peptides are shown to disrupt the bacterial cell wall causing bacterial death like other antimicrobial peptides, such as defensins and cathelicidins. MMP-12 is required for intracellular macrophage anti-microbial activity in mouse peritonitis and pneumonia model. The invention also relates to kits and compns. relating to the MMPAP-12 mols.

L9 ANSWER 6 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:571232 HCAPLUS
DOCUMENT NUMBER: 139:128012
TITLE: Over-**expressed** gene markers useful in compositions, kits, and methods for identification, assessment, prevention, and therapy of rheumatoid arthritis
INVENTOR(S): Guild, Braydon C.; Liao, Hua; Jones, Michael D.; Zolg, Johannes W.; Wu, Jiang
PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 172 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003060465	A2	20030724	WO 2002-US40271	20021217
WO 2003060465	A3	20031211		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003224386	A1	20031204	US 2002-320352	20021216
EP 1454146	A2	20040908	EP 2002-803318	20021217

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

PRIORITY APPLN. INFO.: US 2001-341942P P 20011219
WO 2002-US40271 W 20021217

AB The invention relates to composition, kits, and methods for detecting, characterizing, preventing, and treating **human** rheumatoid arthritis (RA). A variety of newly-identified markers are provided, wherein changes in the levels of **expression** of one or more of the markers is correlated with RA. The markers were initially identified in the synovial fluid of **human** patients who have been diagnosed with either erosive or non-erosive RA. Four hundred ninety markers were identified by mass spectrometry after synovial fluid samples were subjected to digestion of hyaluronic acid followed by a series of protein depletion and fractionation steps to enrich subsets of proteins from the original synovial fluid samples. Some of the identified markers were than validated in serum of patients who have been diagnosed with either erosive or non-erosive RA.

L9 ANSWER 7 OF 31 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 2003:869511 SCISEARCH
THE GENUINE ARTICLE: 727LN
TITLE: Structure and evolutionary aspects of matrix metalloproteinases: A brief overview
AUTHOR: Das S; Mandal M; Chakraborti T; Mandal A; Chakraborti S (Reprint)
CORPORATE SOURCE: Univ Kalyani, Dept Biochem & Biophys, Kalyani 741235, W Bengal, India (Reprint)
COUNTRY OF AUTHOR: India
SOURCE: MOLECULAR AND CELLULAR BIOCHEMISTRY, (NOV 2003) Vol. 253, No. 1-2, pp. 31-40.
Publisher: KLUWER ACADEMIC PUBL, VAN GODEWIJCKSTRAAT 30, 3311 GZ DORDRECHT, NETHERLANDS.
ISSN: 0300-8177.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 70

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The matrix metalloproteinases (MMPs) are **zinc** dependent endopeptidases known for their ability to cleave one or several extracellular matrix (ECM) constituents, as well as non-matrix proteins. They comprise a large family of **proteinases** that share common structural and functional elements and are products of different genes. All members of this family contain a signal peptide, a propeptide and a catalytic domain. The catalytic domain contains two **zinc** ions and at least one calcium ion coordinated to various residues. All MMPs, with the exception matrilysin, have a **hemopexin**/vitronectin-like domain that is connected to the catalytic domain by a hinge or linker region. The **hemopexin**-like domain influences tissue inhibitor of metalloproteinases (TIMP) binding, the binding of certain substrates, membrane activation, and some proteolytic activities. It has been proposed that the origin of MMPs could be traced to before the emergence of vertebrates from invertebrates. It appears conceivable that the domain assemblies occurred at an early stage of the diversification of different MMPs and that they progressed through the evolutionary process independent of one another, and perhaps parallel to each other.

L9 ANSWER 8 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:658295 HCAPLUS
DOCUMENT NUMBER: 137:212221
TITLE: Rat toxicologically relevant genes and use in microarrays to evaluate toxicity of toxic agents
INVENTOR(S): Farris, Georgia; Hicken, Samuel H.; Farr, Spencer B.
PATENT ASSIGNEE(S): Phase-1 Molecular Toxicology, Inc., USA
SOURCE: PCT Int. Appl., 388 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002066682	A2	20020829	WO 2002-US2935	20020129
WO 2002066682	A3	20021219		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2440008	AA	20020829	CA 2002-2440008	20020129
EP 1368499	A2	20031210	EP 2002-728330	20020129
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2004535776	T2	20041202	JP 2002-566386	20020129
PRIORITY APPLN. INFO.:			US 2001-264933P P	20010129
			US 2001-308161P P	20010726
			WO 2002-US2935 W	20020129

AB The invention provides a set of 700 toxicol. relevant rat genes which useful for determining toxicol. responses. The genes are discovered using empirical data from evaluation of differential **expression** of genes in a 17,241 gene set in response to a predetd. set of known toxic chems. in various rat tissues. The 700 genes are split into 3 groups: (1) genes discovered which match a known complete rat gene when the genes were searched in the GenBank database; (2) genes discovered which did not match a known complete rat gene; and (3) genes chosen on the basis of their possible role in critical cellular pathways and empirical data toxicity responsiveness. Thus, the invention provides a method of evaluating the toxicity of an agent is provided by (a) exposing a test animal to the agent; (b) measuring the **expression** of one or more toxic response genes from a set of partial gene sequences in the test animal in response to the agent, thereby generating a test **expression** profile; and (c) comparing the test **expression** profile with a reference **expression** profile indicative of toxicity. The genes corresponding to the partial gene sequences are responsive in one or more of kidney, liver, spleen, heart, lung, testis, or brain tissues.

L9 ANSWER 9 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:928122 HCAPLUS
DOCUMENT NUMBER: 138:12504
TITLE: Method for assaying biomolecules and other constituents using indicator conjugates with synthetic nucleounits in lateral flow, liquid, and dry chemistry techniques
INVENTOR(S): Smith, Jack V.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 46 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002182600	A1	20021205	US 2001-829563	20010411
PRIORITY APPLN. INFO.:			US 2001-829563	20010411

AB The present invention is a method for the use of particles made up of nucleotides or fragments of base groups of DNA and RNA mols. herein referred to as synthetic nucleounits which can be used as recognition mols. with specificity and sensitivity significantly greater than that of antibodies which are used in clin. diagnostics, biotechnol., and research. The method for detecting an analyte using nucleounits targeted to the analyte comprises (1) identifying a nucleounit from a mixture of synthetic random sequences of nucleounit libraries, (2) conjugating the nucleounit to an indicator for the analyte, and (3) detecting the analyte using the nucleounit-indicator conjugate in a buffer. Step 1 is carried out by (a) contacting the analyte with the mixture of synthetic random sequences of nucleounit libraries such that some nucleounits bind the analyte, (b) removing the unbound nucleounits by partitioning, and (c) amplifying the remaining nucleounits by PCR to obtain an enriched solution of nucleounits with high affinity for the analyte. Thus, a method and lateral flow test strip for detection of cytomegalovirus (CMV) presence in a biol. sample such as serum or urine is described. The strip is prepared with three solns., one containing anti-CMV antibodies, one containing "nucleounit to CMV antibody conjugated to red microparticles" and "red microparticles", and another containing "nucleounit to colored particles". The "nucleounit" may be an oligonucleotide aptamer specific for anti-CMV antibodies.

L9 ANSWER 10 OF 31 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 2003:74732 SCISEARCH
THE GENUINE ARTICLE: 633BV
TITLE: Matrix metalloproteinase-21, the **human** orthologue for XMMP, is **expressed** during fetal development and in cancer
AUTHOR: Ahokas K; Lohi J; Lohi H; Elomaa O; Karjalainen-Lindsberg M L; Kere J; Saarialho-Kere U (Reprint)
CORPORATE SOURCE: Univ Helsinki, Dept Dermatol, Heilahdentie 2, FIN-00250 Helsinki, Finland (Reprint); Univ Helsinki, Dept Dermatol, FIN-00250 Helsinki, Finland; Univ Helsinki, Cent Hosp, FIN-00250 Helsinki, Finland; Univ Helsinki, Dept Pathol, FIN-00250 Helsinki, Finland; Univ Helsinki, Dept Med Genet, FIN-00250 Helsinki, Finland; Karolinska Inst, Novum, Dept Biosci, Huddinge, Sweden; Karolinska Inst, Clin Res Ctr, Huddinge, Sweden
COUNTRY OF AUTHOR: Finland; Sweden
SOURCE: GENE, (13 NOV 2002) Vol. 301, No. 1-2, pp. 31-41. Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS. ISSN: 0378-1119.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 30

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB We have characterized a novel **human** matrix metalloproteinase (MMP-21) from **human** placenta DNA complementary to RNA (cDNA). The 569 amino acid translation of the cDNA includes all the typical features of an MMP family member, namely a signal sequence, a prodomain with a PRCGVPD motif, a **zinc**-binding catalytic domain with an HEIGHVLGL sequence, and a **hemopexin**-like domain flanked by two cysteine residues. Furthermore, MMP-21 has a furin activation sequence, but no transmembrane sequence nor a cytoplasmic domain. As in Xenopus laevis and Cynops pyrrhogaster there is an additional insertion of approximately 30 amino acids between the prodomain and the catalytic domain, which is poorly conserved between the species and is in **human** MMP-21 especially proline rich. The MMP-21 gene has seven exons and is located in chromosome 10. This new MMP is the **human** orthologue for XMMP and CyMMP **expressed** during gastrulation of X. laevis and C. pyrrhogaster, respectively. A 2.5 kb messenger RNA was observed in fetal liver by Northern analysis. By reverse

transcription-polymerase chain reaction, MMP-21 is **expressed** in various **human** fetal and adult tissues as well as in cancer cell lines. MMP-21 protein can also be detected in malignancies such as ovarian and colon carcinomas by immunohistochemical staining. Our findings suggest that MMP-21 functions in embryogenesis and tumor progression.

L9 ANSWER 11 OF 31 MEDLINE on STN
ACCESSION NUMBER: 2001247490 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11121398
TITLE: Epilysin, a novel **human** matrix metalloproteinase (MMP-28) **expressed** in testis and keratinocytes and in response to injury.
AUTHOR: Lohi J; Wilson C L; Roby J D; Parks W C
CORPORATE SOURCE: Departments of Pediatrics (Allergy and Pulmonary Medicine) and Cell Biology and Physiology, Washington University School of Medicine, St. Louis, Missouri 63110, USA.. jouko.lohi@helsinki.fi
CONTRACT NUMBER: AR45254 (NIAMS)
SOURCE: Journal of biological chemistry, (2001 Mar 30) 276 (13) 10134-44.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF219624
ENTRY MONTH: 200105
ENTRY DATE: Entered STN: 20010517
Last Updated on STN: 20030105
Entered Medline: 20010510

AB We have **cloned** a new **human** matrix metalloproteinase (MMP-28, epilysin) from **human** keratinocyte and testis cDNA libraries. Like most MMPs, epilysin contains a signal sequence, a prodomain with a PRCGVTD sequence, a **zinc**-binding catalytic domain with an HEIGHTLGLTH sequence, and a **hemopexin**-like domain. In addition, epilysin has a furin activation sequence (RRKKR) but has no transmembrane sequence. The exon-intron organization and splicing pattern of epilysin differ from that of other MMP genes. It has only 8 exons, and 5 exons are spliced at sites not used by other MMPs. Another novel feature of epilysin is that exon 4 is alternatively spliced to a transcript that does not encode the N-terminal half of the catalytic domain. Northern hybridization of tissue RNA indicated that epilysin is **expressed** at high levels in testis and at lower levels in lungs, heart, colon, intestine, and brain. RNase protection assay with various cell lines indicated that epilysin was selectively **expressed** in keratinocytes. **Recombinant** epilysin degraded casein in a zymography assay, and its proteolytic activity was inhibited by EDTA and by batimastat, a selective MMP inhibitor. Immunohistochemical staining showed **expression** of epilysin protein in the basal and suprabasal epidermis of intact skin. In injured skin, prominent staining for epilysin was seen in basal keratinocytes both at and some distance from the wound edge, a pattern that is quite distinct from that of other MMPs **expressed** during tissue repair. These findings suggest that this new MMP functions in several tissues both in tissue homeostasis and in repair.

L9 ANSWER 12 OF 31 MEDLINE on STN
ACCESSION NUMBER: 2001442197 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11489172
TITLE: Transcriptional activation by the sexual pheromone and wounding: a new gene family from Volvox encoding modular proteins with (hydroxy)proline-rich and metalloproteinase homology domains.

AUTHOR: Hallmann A; Amon P; Godl K; Heitzer M; Sumper M
CORPORATE SOURCE: Lehrstuhl Biochemie I, Universitat Regensburg, Universitatstr. 31, D-93053 Regensburg, Germany.. armin.hallmann@vkl.uni-regensburg.de
SOURCE: Plant journal : for cell and molecular biology, (2001 Jun) 26 (6) 583-93.
Journal code: 9207397. ISSN: 0960-7412.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AJ311547; GENBANK-AJ311548; GENBANK-AJ311549; GENBANK-AJ311550
ENTRY MONTH: 200110
ENTRY DATE: Entered STN: 20010813
Last Updated on STN: 20011008
Entered Medline: 20011004

AB The green alga Volvox represents the simplest kind of multicellular organism: it is composed of only two cell types, somatic and reproductive, making it suitable as a model system. The sexual development of males and females of Volvox carteri is triggered by a sex-inducing pheromone at a concentration of < 10-16 M. Early biochemical responses to the pheromone involve structural modifications within the extracellular matrix (ECM). By differential screenings of cDNA libraries made from mRNAs of pheromone-treated Volvox, four novel genes were identified that encode four closely related Volvox metalloproteinases that we use to define a new protein family, the VMPs. The existence of several features common to matrix glycoproteins, such as signal peptides, a (hydroxy)proline content of 12-25%, and Ser(Pro)2-4 repeats, suggest an extracellular localization of the VMPs within the ECM. Synthesis of VMP cDNAs is triggered not only by the sex-inducing pheromone, but also by wounding, and is restricted to the somatic cell type. Sequence comparisons suggest that the VMPs are members of the MB clan of **zinc**-dependent matrix metalloproteinases, although the putative **zinc** binding site of all VMPs is QEXXHXXGXXH rather than HEXXHXXGXXH. The presence of glutamine instead of histidine in the **zinc** binding motif suggests a novel family, or even clan, of **peptidases**. Like the **matrixin** family of **human** collagenases, Volvox VMPs exhibit a modular structure: they possess a metalloproteinase homology domain and a (hydroxy)proline-rich domain, and one of them, VMP4, also has two additional domains. Metalloproteinases seem to be crucial for biochemical modifications of the ECM during development or after wounding in the lower eukaryote Volvox with only two cell types, just as in higher organisms.

L9 ANSWER 13 OF 31 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2000396579 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10801841
TITLE: Identification and characterization of **human** endometase (Matrix metalloproteinase-26) from endometrial tumor.
AUTHOR: Park H I; Ni J; Gerkema F E; Liu D; Belozerov V E; Sang Q X
CORPORATE SOURCE: Department of Chemistry and Institute of Molecular Biophysics, Florida State University, Tallahassee, Florida 32306-4390, USA.
CONTRACT NUMBER: CA78646 (NCI)
SOURCE: Journal of biological chemistry, (2000 Jul 7) 275 (27) 20540-4.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF248646

ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 20000824
Last Updated on STN: 20000824
Entered Medline: 20000816

AB We report the discovery, **cloning**, and characterization of a novel **human** matrix metalloproteinase 26 (MMP-26) (**matrixin**) gene, endometase, an endometrial tumor-derived metalloproteinase. Among more than three million **expressed** sequence tags sequenced, the endometase gene was only obtained from **human** endometrial tumor cDNA library. Endometase mRNA was **expressed** specifically in **human** uterus, not in other tissues/cells tested, e.g. testis, heart, brain, lungs, liver, thymus, and melanoma G361. Endometase protein has a signal peptide, a propeptide domain, and a catalytic domain with a unique "cysteine switch" propeptide sequence, PHCGVPDGSD, and a **zinc**-binding motif, VATHEIGHSLGLQH. Endometase is 43, 41, 41, and 39% identical to **human** metalloelastase, stromelysin, collagenase-3, and matrilysin, respectively. The zymogen was **expressed** and isolated from Escherichia coli as inclusion bodies with a molecular mass of 28 kDa. The identity and homogeneity of the **recombinant** protein was confirmed by protein N-terminal sequencing, silver stain, and immunoblot analyses. The pro-enzyme was partially activated during the folding process. Endometase selectively cleaved type I gelatin and alpha(1)-**proteinase** inhibitor; however, it did not digest collagens, laminin, elastin, beta-casein, plasminogen, soybean trypsin inhibitor, or Bowman-Birk inhibitor. It hydrolyzed peptide substrates of **matrixins** and tumor necrosis factor-alpha converting enzyme. Endometase may selectively cleave extracellular matrix proteins, inactivate serpins, and process cytokines.

L9 ANSWER 14 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:160199 HCAPLUS
DOCUMENT NUMBER: 133:3099
TITLE: **Human** MT6-matrix metalloproteinase: identification, progelatinase A activation, and **expression** in brain tumors
AUTHOR(S): Velasco, Gloria; Cal, Santiago; Merlos-Suarez, Anna; Ferrando, Adolfo A.; Alvarez, Sonsoles; Nakano, Atsuhisa; Arribas, Joaquin; Lopez-Otin, Carlos
CORPORATE SOURCE: Departamento de Bioquimica y Biologia Molecular, Facultad de Medicina, Universidad de Oviedo, Oviedo, 33006, Spain
SOURCE: Cancer Research (2000), 60(4), 877-882
CODEN: CNREA8; ISSN: 0008-5472
PUBLISHER: AACR Subscription Office
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The localization of proteolytic enzymes at the cell surface is a widely used strategy for facilitating tumor invasion. In this study, the authors have **cloned** a new member of the membrane-type subfamily of matrix metalloproteinases (MT-MMPs), a group of enzymes associated with tumor progression. The **cloned** cDNA encodes a protein of 562 amino acids with a domain organization similar to that of other MT-MMPs, including a prodomain with a cysteine switch, a catalytic domain with the **zinc**-binding site, a **hemopexin**-like domain, and a COOH-terminal extension rich in hydrophobic residues. The predicted protein sequence also contains a short insertion of basic residues located between the propeptide and the catalytic domain and involved in the proteolytic activation of MT-MMPs by furin-like enzymes. Furthermore, immunofluorescence and Western blot anal. of COS-7 cells transfected with the isolated cDNA revealed that the encoded protein is localized at the cell surface. Based on these properties, this novel **human** matrix metalloproteinase has been called MT6-MMP because it is the sixth identified member of this subfamily of matrix metalloproteinase.

Cotransfection of **expression** plasmids encoding MT6-MMP and progelatinase A resulted in activation of COS-7-secreted progelatinase A, as demonstrated by gelatin zymog. In contrast, transfection of progelatinase A cDNA alone did not lead to the activation of the proenzyme. Northern blot anal. of polyadenylated RNAs isolated from **human** tissues demonstrated that MT6-MMP is predominantly **expressed** in leukocytes, lung, and spleen. MT6-MMP was also detected at high levels in SW480 colon carcinoma cells as well as in some anaplastic astrocytomas and glioblastomas, but not in normal colon or brain or in meningiomas. On the basis of these results, the authors propose that MT6-MMP may facilitate tumor progression through its ability to activate progelatinase A at the membrane of cells from colon carcinomas or brain tumors.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 15 OF 31 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 1999:274899 SCISEARCH
THE GENUINE ARTICLE: 181PV
TITLE: Identification and characterization of the fifth membrane-type matrix metalloproteinase MT5-MMP
AUTHOR: Pei D Q (Reprint)
CORPORATE SOURCE: UNIV MINNESOTA, DEPT PHARMACOL, 3-249 MILLARD HALL, 435 DELAWARE ST SE, MINNEAPOLIS, MN 55455 (Reprint)
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (26 MAR 1999) Vol. 274, No. 13, pp. 8925-8932.
Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814.
ISSN: 0021-9258.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 38

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB A new member of the membrane-type matrix metalloproteinase (MT-MMP) subfamily tentatively named MT5-MMP was isolated from mouse brain cDNA library. It is predicted to contain (i) a candidate signal sequence, (ii) a propeptide region with the highly conserved PRCGVPD sequence, (iii) a potential furin recognition motif RRRRNKR, (iv) a **zinc**-binding catalytic domain, (v) a **hemopexin**-like domain, (vi) a 24 residue hydrophobic domain as a potential transmembrane domain, and (vii) a short cytosolic domain. Reverse transcriptase-polymerase chain reaction analysis of its transcripts indicates that MT5-MMP is **expressed** in a brain-specific manner consistent with the origin of its EST **clone** from cerebellum. It is also highly **expressed** during embryonic development at stages day 11 and 15. Like other MT-MMPs, MT5-MMP specifically activates progelatinase A when co-**expressed** in Madin-Darby canine kidney cells. Its ability to activate progelatinase A is dependent on its proteolytic activity since a mutation converting Glu to Ala in the **zinc** binding motif HE(255)LGH renders MT5-MMP inactive against progelatinase A. In contrast to other MT-MMPs, MT5-MMP tends to shed from cell surface as soluble **proteinases**, thus offering flexibility as both a cell bound and soluble **proteinase** for extracellular matrix remodeling processes. Taken together, these properties serve to distinguish MT5-MMP as a versatile MT-MMP playing an important role in extracellular matrix remodeling events in the brain and during embryonic development.

L9 ANSWER 16 OF 31 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN DUPLICATE 2

ACCESSION NUMBER: 1999243180 EMBASE
TITLE: Therapeutic promises of leukocyte elastase and macrophage

metalloelastase inhibitors for the treatment of pulmonary emphysema.

AUTHOR: Skiles J.W.; Jeng A.Y.

CORPORATE SOURCE: J.W. Skiles, Arthritis and Bone Metabolism, Chemical Research, Novartis Institute Biomedical Res., 556 Morris Avenue, Summit, NJ 07901, United States. jerry.skiles@pharma.novartis.com

SOURCE: Expert Opinion on Therapeutic Patents, (1999) 9/7 (869-895).
Refs: 69
ISSN: 1354-3776 CODEN: EOTPEG

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; General Review

FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
030 Pharmacology
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

AB The fibrous protein elastin, which comprises an appreciable percentage of all protein content in some tissues, such as arteries, some ligaments, and the lungs, can be hydrolysed or otherwise destroyed by a select group of enzymes classified as elastases. To date four elastases are known, three of which are **human**: **human** leukocyte elastase (HLE), pancreatic elastase II (PE-II) and macrophage metalloelastase (MME, MMP-12). **Human** leukocyte and pancreatic elastases are both serine **proteinases** (i.e., having a catalytic triad corresponding to Ser195, Asp102 and His57 of chymotrypsin). However, macrophage metalloelastase is a member of the matrix metalloproteinase family (MMPs, **matrixins**), which contain a **zinc** atom at the catalytic site. Imbalances in the levels or regulation of tissue or cellular **proteases** are thought to manifest themselves in various disease states. In order to prevent self-inflicted tissue damage due to over **expression** of enzymes, numerous endogenous inhibitors directed against proteolytic enzymes exist. In the case of **human** leukocyte elastase the primary endogenous inhibitor is α1-**proteinase** inhibitor (α1-PI). In the case of the MMPs the endogenous inhibitors are the tissue inhibitors of metalloproteinases (TIMPs). Both of these natural inhibitors are proteins. Because of the liabilities of proteins as drugs, low molecular weight inhibitors may be useful as therapeutic agents as a replacement to α1-PI and TIMPs. Since HLE and MME have been implicated in the pathogenesis of pulmonary emphysema, inhibitors of these enzymes should have beneficial effects for the treatment of this chronic disease. This report reviews inhibitors of HLE that have appeared in the parent literature since 1997 as well as patents that specifically claim MME inhibition.

L9 ANSWER 17 OF 31 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 1999:797469 SCISEARCH

THE GENUINE ARTICLE: 245XV

TITLE: Structure of **recombinant** mouse collagenase-3 (MMP-13)

AUTHOR: Botos I; Meyer E; Swanson S M; Lemaitre V; Eeckhout Y; Meyer E F (Reprint)

CORPORATE SOURCE: TEXAS A&M UNIV, DEPT BIOCHEM & BIOPHYS, BIOGRAPH LAB, COLLEGE STN, TX 77843 (Reprint); TEXAS A&M UNIV, DEPT BIOCHEM & BIOPHYS, BIOGRAPH LAB, COLLEGE STN, TX 77843; UNIV LOUVAIN, CELL BIOL UNIT, BRUSSELS, BELGIUM

COUNTRY OF AUTHOR: USA; BELGIUM

SOURCE: JOURNAL OF MOLECULAR BIOLOGY, (1 OCT 1999) Vol. 292, No. 4, pp. 837-844.
Publisher: ACADEMIC PRESS LTD, 24-28 OVAL RD, LONDON NW1 7DX, ENGLAND.
ISSN: 0022-2836.

DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 55

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The matrix metalloproteinases are crucial in the physiological and pathological degradation of the mammalian extracellular matrix, including breast tumours, and osteoarthritic cartilage. These enzymes are classified according to their matrix substrate specificity. Collagenase-3 (MMP-13) is a member of this family and preferentially cleaves type II collagen, cartilage, fibronectin and aggrecan. Collagenase-3 is normally **expressed** in hypertrophic chondrocytes, periosteal cells, and osteoblasts during bone development. The structure of the catalytic domain of **recombinant** mouse collagenase-3, complexed to the hydroxamate inhibitor (RS-113456), is reported at 2.0 Angstrom resolution. Molecular replacement and weak phasing information from a single derivative determined the structure. Neither molecular replacement nor derivative methods had a sufficient radius of convergence to yield a refinable structure. The structure illuminates the atomic **zinc** ion interactions with functional groups in the active site, emphasizing **zinc** Ligation and the very voluminous hydrophobic P1' group for the inhibitor potency. The structure provides insight into the specificity of this enzyme, facilitating design of specific inhibitors to target various diseases. (C) 1999 Academic Press.

L9 ANSWER 18 OF 31 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 1999:550108 SCISEARCH
THE GENUINE ARTICLE: 214PR
TITLE: Effects of culture conditions and exposure to catabolic stimulators (IL-1 and retinoic acid) on the **expression** of matrix metalloproteinases (MMPs) and disintegrin metalloproteinases (ADAMs) by articular cartilage chondrocytes
AUTHOR: Flannery C R (Reprint); Little C B; Caterson B; Hughes C E
CORPORATE SOURCE: UNIV WALES COLL CARDIFF, CARDIFF SCH BIOSCI, CONNECT TISSUE BIOL LABS, MUSEUM AVE, CARDIFF CF1 3US, S GLAM, WALES (Reprint)
COUNTRY OF AUTHOR: WALES
SOURCE: MATRIX BIOLOGY, (JUN 1999) Vol. 18, No. 3, pp. 225-237. Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
ISSN: 0945-053X.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 53

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The chondrocytes of articular cartilage synthesize a number of **proteinases** which are capable of degrading the component molecules of this specialized extracellular matrix. The use of class-specific **proteinase** inhibitors indicates that major activities responsible for catabolism of proteoglycan (aggrecan) and collagen are attributable to **zinc**-dependent metalloproteinases. In this study, we have compared the mRNA **expression** profiles of two matrix metalloproteinases (MMP-3 and MMP-13) and five disintegrin-metalloproteinases (ADAM-10, ADAM-9, ADAM-15, TNF-a-converting enzyme and decysin) by chondrocytes (**human**, porcine and bovine) from fresh cartilage and in cartilage explant cultures and isolated cells cultured in monolayer or in agarose gels. Such cultures were maintained in the presence or absence of interleukin-1 (IL-1) or all-trans-retinoic acid, two agents which promote cartilage matrix degradation in vitro. Whereas transcripts for all metalloproteinases examined were detected in chondrocytes from **human** osteoarthritic cartilage in monolayer cultures, mRNAs for

ADAM-15 and decysin were not present in fresh osteoarthritic **human** cartilage or explant cultures. Similarly, **expression** of porcine and bovine metalloproteinase mRNAs varied with different culture conditions. Novel cDNA sequences obtained for porcine and bovine MMP-3 and MMP-13, porcine ADAM-10, porcine and bovine ADAM-9 and porcine TACE confirmed **expression** of mRNAs for these molecules by articular chondrocytes, Quantitative RT-PCR analysis was used to determine the effects of IL-1 and retinoic acid on metalloproteinase mRNA levels in **human** chondrocytes cultured in monolayer and in porcine chondrocytes cultured in agarose. For the MMPs, IL-1 treatment resulted in an approximately two to threefold increase in **human** and porcine MMP-3 and MMP-13 mRNAs, while retinoic acid treatment caused a statistically significant increase in **human** MMP-3 mRNA levels, but no significant change in transcript levels for porcine MMP-3 nor **human** or porcine MMP-13. The mRNA levels for ADAM-15 were elevated in hum;ln monolayer chondrocytes exposed to IL-1 or retinoic acid, while transcripts levels for TNF-alpha converting enzyme were increased in response to retinoic acid. In contrast, ADAM-9 mRNA levels were decreased in **human** monolayer chondrocytes exposed to IL-1 or retinoic acid. The results demonstrate that chondrocyte metalloproteinase **expression** can vary dependent on cell environment in situ and in vitro, and provide new information on chondrocyte MMP and ADAM gene **expression** following cytokine (IL-1) or retinoid stimulation.

L9 ANSWER 19 OF 31 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 1998:715256 SCISEARCH
THE GENUINE ARTICLE: 119JT
TITLE: Collagenase 2 (MMP-8) **expression** in murine tissue-remodeling processes - Analysis of its potential role in postpartum involution of the uterus
AUTHOR: Balbin M; Fueyo A; Knauper V; Pendas A M; Lopez J M; Jimenez M G; Murphy G; LopezOtin C (Reprint)
CORPORATE SOURCE: UNIV OVIEDO, FAC MED, DEPT BIOQUIM & BIOL MOL, E-33006 OVIEDO, SPAIN (Reprint); UNIV OVIEDO, FAC MED, DEPT BIOQUIM & BIOL MOL, E-33006 OVIEDO, SPAIN; UNIV OVIEDO, FAC MED, DEPT BIOL FUNC, E-33006 OVIEDO, SPAIN; UNIV OVIEDO, FAC MED, DEPT MORFOL & BIOL CELULAR, E-33006 OVIEDO, SPAIN; UNIV E ANGLIA, SCH BIOL SCI, NORWICH NR4 7TJ, NORFOLK, ENGLAND
COUNTRY OF AUTHOR: SPAIN; ENGLAND
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (11 SEP 1998) Vol. 273, No. 37, pp. 23959-23968.
Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814.
ISSN: 0021-9258.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 57

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Neutrophil collagenase or collagenase 2 (MMP-8) is unique among the family of matrix metalloproteinases (MMPs) because of its exclusive pattern of **expression** in inflammatory conditions. At present, no evidence of the occurrence of this enzyme in tissues other than **human** has been reported. In this work, we have **cloned** the murine homologue of **human** collagenase 2. The isolated cDNA contains an open reading frame coding for a polypeptide of 465 amino acids, which is 74% identical to its **human** counterpart. The mouse collagenase 2 exhibits the domain structure characteristic of several MMPs, including a signal sequence, a prodomain with the cysteine residue essential for enzyme latency, an activation locus with the

Zinc-binding site, and a COOH-terminal fragment with sequence similarity to **hemopexin**. It also contains the three conserved residues (Tyr-209, Asp-230, and Gly-232) located around the **Zinc** -binding site and are distinctive of the collagenase subfamily. Northern blot analysis of RNAs isolated from a variety of mouse tissues revealed that collagenase 2 is **expressed** at late stages during mouse embryogenesis, coinciding with the appearance of hematopoietic cells. In addition, collagenase 2 was highly **expressed** in the postpartum uterus starting at 1 day postpartum and extending up to 5 days. Enzymatic analysis revealed that matrilysin, another MMP overexpressed in uterine tissue, is able to activate murine procollagenase 2. These data suggest that both enzymes could form an activation cascade resulting in the generation of the collagenolytic activity required during the process of massive connective tissue resumption occurring in the involuting uterus.

L9 ANSWER 20 OF 31 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 1998:695245 SCISEARCH
THE GENUINE ARTICLE: 116RN
TITLE: Matrix metalloproteinases: structures, evolution, and diversification
AUTHOR: Massova I; Kotra L P; Fridman R; Mobashery S (Reprint)
CORPORATE SOURCE: WAYNE STATE UNIV, DEPT CHEM, DETROIT, MI 48202 (Reprint); WAYNE STATE UNIV, DEPT CHEM, DETROIT, MI 48202; WAYNE STATE UNIV, DEPT PATHOL, DETROIT, MI 48202; WAYNE STATE UNIV, KARMANOS CANC INST, DETROIT, MI 48202
COUNTRY OF AUTHOR: USA
SOURCE: FASEB JOURNAL, (SEP 1998) Vol. 12, No. 12, pp. 1075-1095. Publisher: FEDERATION AMER SOC EXP BIOL, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3998. ISSN: 0892-6638.
DOCUMENT TYPE: General Review; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 58

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB A comprehensive sequence alignment of 64 members of the family of matrix metalloproteinases (MMPs) for the entire sequences, and subsequently the catalytic and the **hemopexin**-like domains, have been performed. The 64 MMPs were selected from plants, invertebrates, and vertebrates. The analyses disclosed that as many as 23 distinct subfamilies of these proteins are known to exist. Information from the sequence alignments: was correlated with structures, both crystallographic as well as computational, of the catalytic domains for the 23 representative members of the MMP family. A survey of the metal binding sites and two loops containing variable sequences of amino acids, which are important for substrate interactions, are discussed. The collective data support the proposal that the assembly of the domains into multidomain enzymes was likely to be an early evolutionary event. This:was followed by diversification, perhaps in parallel among the MMPs, in a subsequent evolutionary time scale. Analysis indicates that a retrograde structure simplification may have accounted for the evolution of MMPs with simple domain constituents, such as matrilysin, from the larger and more elaborate enzymes.

L9 ANSWER 21 OF 31 MEDLINE on STN DUPLICATE 3

ACCESSION NUMBER: 1998010662 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9346968
TITLE: Activation mechanism of meprins, members of the astacin metalloendopeptidase family.
AUTHOR: Johnson G D; Bond J S
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, The Pennsylvania State University College of Medicine, Hershey, Pennsylvania 17033-0850, USA.

CONTRACT NUMBER: DK09238 (NIDDK)
DK19691 (NIDDK)
SOURCE: Journal of biological chemistry, (1997 Oct 31) 272 (44) 28126-32.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199712
ENTRY DATE: Entered STN: 19980109
Last Updated on STN: 20000303
Entered Medline: 19971209

AB Meprins are mammalian **zinc** metalloendopeptidases with **protease** domains structurally related to astacin, the prototype of the "astacin family" of metalloproteases. Mature, active astacins are produced by proteolytic removal of an activation peptide to generate a new NH2-terminal residue. Structural studies indicate that the NH2-terminal ammonium group inserts into a water-filled cavity adjacent to the active site to form a salt bridge with a Glu residue that is conserved in all astacins. A similar interaction is known to play a crucial role in the activation of trypsin, resulting in the hypothesis that this salt bridge is required for the activation of astacin-like **proteases**. In this study, we have used the mouse meprin alpha subunit as a model to test this hypothesis of zymogen activation of the astacins. Mutants were generated to vary the NH2-terminal residue of the mature meprin alpha subunit (Asn78) and its putative salt bridge partner (Glu178). In addition, mutants creating NH2-terminal extensions and truncations were **expressed** in **human** embryonic kidney 293 cells. The **recombinant** proteins were activated by limited **protease** digestion and assayed for enzymatic activity and thermal stability. Point mutations of Asn78 resulted in enzymes with activity comparable to the wild-type enzyme, indicating that the structure of this side chain is not essential for activity. NH2-terminal extension mutants of meprin alpha retained partial activity, with greater decreases against peptide relative to protein substrates. A mutant with a deletion of Asn78 to disrupt salt bridge formation with Glu178 had full activity, indicating that the putative salt bridge with Glu178 is not essential for enzyme activity. However, all changes in meprin alpha subunit NH2-terminal structure were found to decrease the thermal stability of the enzyme. These observations and additional data indicate that the zymogen activation mechanism of meprin and other astacins differs from that of the trypsin family of enzymes, and has some features in common with **matrixins**. It is proposed that prosequence removal of astacins allows the formation of hydrogen bonds involving the two NH2-terminal residues that are critical for enzyme structure.

L9 ANSWER 22 OF 31 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 97:459495 SCISEARCH
THE GENUINE ARTICLE: XD805
TITLE: Sea urchin hatching enzyme (envelysin): cDNA **cloning** and deprivation of protein substrate specificity by autolytic degradation
AUTHOR: Nomura K (Reprint); Shimizu T; Kinoh H; Sendai Y; Inomata M; Suzuki N
CORPORATE SOURCE: TOKYO METROPOLITAN INST GERONTOL, DEPT BIOCHEM, ITABASHI KU, 35-2 SAKAECHO, TOKYO 173, JAPAN (Reprint); HOKKAIDO UNIV, GRAD SCH SCI, DIV BIOL SCI, KITA KU, SAPPORO, HOKKAIDO 060, JAPAN; TOYAMA MED & PHARMACEUT UNIV, FAC MED, DEPT BIOCHEM, SUGITANI, TOYAMA 93001, JAPAN; RES INST FUNCT PEPTIDES, YAMAGATA 990, JAPAN
COUNTRY OF AUTHOR: JAPAN
SOURCE: BIOCHEMISTRY, (10 JUN 1997) Vol. 36, No. 23, pp. 7225-7238

Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036.
ISSN: 0006-2960.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 74

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The hatching enzyme (envelysin) of the sea urchin Hemicentrotus pulcherrimus was purified from the medium of hatched blastulae. By cDNA **cloning** its deduced amino acid sequence and molecular architecture were revealed. The 591-residue precursor with calculated M-r of 66 123 consists of an 18-residue signal sequence, a 151-residue propeptide, and a 422-residue mature enzyme with N-terminal catalytic and C-terminal **hemopexin**-like domains. As compared with that of Paracentrotus lividus, its amino acid sequence is 69% identical and 10% similar. They share typical structural features with the mammalian MMP gene family members: cysteine switch, **zinc**-binding signature, methionine-turn, Cys residues near both ends of **hemopexin**-like domain, etc. However, its propeptide has a 70-residue extra sequence with an Asp- and Glu-rich stretch, supposedly involved in the proenzyme activation by binding Ca2+ ions in seawater. The hinge region is also longer than those of most MMPs, with an extra sequence rich in Thr and Arg residues. Mature 50K enzyme is highly susceptible to autolytic cleavage at Gln(503)-Leu(504), producing the 38K form retaining catalytic activity and substrate specificity against fertilization envelope. The 38K form and 15K fragment were coeluted from a gel-filtration column, suggesting that these two fragments are disulfide-bridged and that the tertiary structure is not much deviated. The 38K form further autolyzed to 32K form by cleaving Tyr(450)-Tyr(451) bond with the loss of protein-substrate specificity, retaining only nonspecific **protease** activity. Thus, the autolytic release of 2/3 of the C-terminal domain reduced the highly specific enzyme to a common nonspecific **protease**, implying that the size and structure of almost the entire **hemopexin**-like domain is essential for the protein substrate specificity. Moreover, autolytic degradation of envelysins from the two species follow quite different pathways despite their high homology in structure. The 38K and 32K forms were inhibited by bovine TIMP-1 with different IC50 values, indicating that its inhibitory activity depends on the extent of the interaction with the C-terminal domain of the enzyme.

L9 ANSWER 23 OF 31 MEDLINE on STN
ACCESSION NUMBER: 97448957 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9303281
TITLE: Matrix metalloproteinases. Novel targets for directed cancer therapy.
AUTHOR: Yu A E; Hewitt R E; Connor E W; Stetler-Stevenson W G
CORPORATE SOURCE: Laboratory of Pathology, National Cancer Institute, National Institutes of Health, Bethesda, Maryland, USA.
SOURCE: Drugs & aging, (1997 Sep) 11 (3) 229-44. Ref: 144
Journal code: 9102074. ISSN: 1170-229X.
PUB. COUNTRY: New Zealand
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199712
ENTRY DATE: Entered STN: 19980109
Last Updated on STN: 20000303
Entered Medline: 19971217

AB Matrix metalloproteinases (MMPs), or **matrixins**, are a family of **zinc** endopeptidases that play a key role in both physiological and

pathological tissue degradation. Normally, there is a careful balance between cell division, matrix synthesis and matrix degradation, which is under the control of cytokines, growth factors and cell matrix interactions. The MMPs are involved in remodelling during tissue morphogenesis and wound healing. Under pathological conditions, this balance is altered: in arthritis, there is uncontrolled destruction of cartilage; in cancer, increased matrix turnover is thought to promote tumour cell invasion. The demonstration of a functional role of MMPs in arthritis and tumour metastasis raises the possibility of therapeutic intervention using synthetic MMP inhibitors with appropriate selectivity and pharmacokinetics. As the process of drug discovery focuses on structure-based design, efforts to resolve the 3-dimensional structures of the MMP family have intensified. Several novel MMP inhibitors have been identified and are currently being investigated in clinical trials. The structural information that is rapidly accumulating will be useful in refining the available inhibitors to selectively target specific MMP family members. In this review, we focus on the role of MMPs and their inhibitors in tumour invasion, metastasis and angiogenesis, and examine how MMPs may be targeted to prevent cancer progression.

L9 ANSWER 24 OF 31 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 96234364 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8640782
TITLE: Molecular **cloning** of a novel membrane-type matrix metalloproteinase from a **human** breast carcinoma.
AUTHOR: Puente X S; Pendas A M; Llano E; Velasco G; Lopez-Otin C
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, School of Medicine, University of Oviedo, Spain.
SOURCE: Cancer research, (1996 Mar 1) 56 (5) 944-9.
Journal code: 2984705R. ISSN: 0008-5472.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-X89576
ENTRY MONTH: 199607
ENTRY DATE: Entered STN: 19960726
Last Updated on STN: 20000303
Entered Medline: 19960715

AB A new member of the matrix metalloproteinase (MMP) family of enzymes has been **cloned** from a **human** breast carcinoma cDNA library. The isolated cDNA contains an open reading frame 1554 bp long, encoding a polypeptide of 518 amino acids. The predicted amino acid sequence displays a similar domain organization as the remaining MMPs, including a prodomain with the activation locus, the **zinc** -binding site, and the **hemopexin** domain. In addition, it contains a C-terminal extension, rich in hydrophobic residues and similar in size to those present in the different membrane-type MMPs (MT-MMPs) identified to date. On the basis of these structural characteristics, this novel MMP has been tentatively called MT4-MMP, because it represents the fourth member of this subclass of MMPs characterized mainly by the occurrence of putative transmembrane domain in their amino acid sequences. MT4-MMP also contains a nine-residue insertion between the propeptide and the catalytic domain, which is a common feature of MT-MMPs and stromelysin-3. This amino acid sequence insertion ends with the consensus sequence R-X-R/K-R, which seems to be essential in the activation of these **proteinases** by furin. Northern blot analysis of polyadenylated RNAs isolated from a variety of **human** tissues revealed that the MT4-MMP gene (MMP-17) is **expressed** mainly in the brain, leukocytes, the colon, the ovary, and the testis. The **expression** of MT4-MMP in leukocytes together with its putative membrane localization suggest that this enzyme could be involved in the activation of membrane-bound precursors of growth factors or inflammatory mediators such as tumor necrosis factor-alpha. In addition, MT4-MMP transcripts were

detected in all breast carcinomas, as well as in all breast cancer cell lines analyzed in the present work. On the basis of these **expression** data in breast tumors, a potential role for **human** MT4-MMP in the tumoral process is also suggested.

L9 ANSWER 25 OF 31 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:49599 HCAPLUS
DOCUMENT NUMBER: 126:114848
TITLE: The astacin family of metalloendopeptidases
AUTHOR(S): Jiang, Weiping; Bond, Judith S.
CORPORATE SOURCE: Dept. of Biochem. and Molecular Biology, Pennsylvania State Univ. College of Med., Hershey, PA, 17033, USA
SOURCE: Zinc Metalloproteases in Health and Disease (1996), 23-45. Editor(s): Hooper, Nigel M. Taylor & Francis: London, UK.
CODEN: 63WOAB
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with .apprx.60 refs. Mol. **cloning** and DNA sequencing of a mammalian kidney and intestinal brush border membrane **protease** (EC 3.4.24.18) led to the discovery of the 'astacin family', a new family of metalloproteases. The family was named after a 200 amino acid crayfish endopeptidase called astacin, the first member of the group to be sequenced and crystallized Thirty members have now been identified including meprins, bone morphogenetic protein-1 (BMP-1), and tolloid. The signature sequence for the family is: HEXXHXXGFXHEXXRXDR. Structural studies indicate these proteins bind **zinc** pentaco-ordinately, unlike thermolysin-like **proteases**, and bear relationships to serralysins, **matrixins** and snake venom metalloproteases. The **protease** domains of members of the astacin family share 18 to 98% amino acid identity, and have other domain similarities. For example, most members are synthesized with pre- and pro-sequences immediately NH2-terminal to the **protease** domain. Several members contain one or two copies of epidermal growth factor (EGF)-like domains, and complement-like domains (Clr/Cls) near the COOH-terminus. The pasting and patching of different domains to the **protease** domain create proteins of very different sizes and functions. The proteins of the family identified thus far are either bound to the plasma membrane or secreted from cells. They are **expressed** in a tissue- and species-specific manner in mature organisms, and in a temporal and spatial specific manner in developmental systems. They have been identified in a wide variety of species including bacteria, hydra, nematodes, fruit flies, frogs, fish, sea urchins, quail, mice, rats and **humans**. They are suggested to play roles in embryonic stages of development (in processes such as dorsal-ventral patterning, hatching, and eggshell matrix degradation), and in mature organisms (in processes such as cartilage and bone formation, fragmentation of peptide hormones or urinary proteins and in processes leading to extensive degradation). This chapter reviews the recent advances on the structure, function, regulation and evolution of the astacin family.

L9 ANSWER 26 OF 31 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 96032716 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7559421
TITLE: Identification of structural determinants controlling **human** and mouse stromelysin-3 proteolytic activities.
AUTHOR: Noel A; Santavicca M; Stoll I; L'Hoir C; Staub A; Murphy G; Rio M C; Basset P
CORPORATE SOURCE: Institut de Genetique et de Biologie Moleculaire et Cellulaire, CNRS/INSERM/ULP, BP163, Illkirch, CU de Strasbourg, France.
SOURCE: Journal of biological chemistry, (1995 Sep 29) 270 (39)

22866-72.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199511
ENTRY DATE: Entered STN: 19951227
Last Updated on STN: 20000303
Entered Medline: 19951106

AB Matrix metalloproteinases (**matrixins**) constitute a group of extracellular **proteinases** belonging to the metzincin superfamily. They are involved in both physiological and pathological tissue remodeling processes, including those associated with cancer progression. Stromelysin-3, which is **expressed** in most invasive **human** carcinomas, is a matrix metalloproteinase with unusual functional properties. In particular, its mature form does not cleave any of the major extracellular matrix components. To define critical structural determinants involved in controlling stromelysin-3 proteolytic activity, we have used site-directed mutagenesis. We show that the deletion of at least 175 C-terminal amino-acids is sufficient to endow mouse stromelysin-3 with activities against casein, laminin, and type IV collagen. In the case of the **human** enzyme, however, a further and single Ala-235-->Pro substitution is necessary to observe similar activities. Ala-235, which characterizes **human** stromelysin-3 among **matrixins**, is located immediately after the C terminus of the "Met-turn," which forms a hydrophobic basis for the catalytic **zinc** atom in the metzincin family. We conclude that **human** stromelysin-3 has gained specific functional properties during evolution by amino acid substitution in the catalytic **zinc** environment, and that it represents an attractive target for specific inhibitors that may be used to prevent cancer progression.

L9 ANSWER 27 OF 31 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 95:330834 SCISEARCH
THE GENUINE ARTICLE: QW981
TITLE: THE METZINCINS - TOPOLOGICAL AND SEQUENTIAL RELATIONS BETWEEN THE ASTACINS, ADAMALYSINS, SERRALYSINS, AND **MATRIXINS** (COLLAGENASES) DEFINE A SUPERFAMILY OF **ZINC-PEPTIDASES**
AUTHOR: STOCKER W (Reprint); GRAMS F; BAUMANN U; REINEMER P; GOMISRUTH F X; MCKAY D B; BODE W
CORPORATE SOURCE: UNIV HEIDELBERG, INST ZOOL, NEUENHEIMER FELD 230, D-69120 HEIDELBERG, GERMANY (Reprint); MAX PLANCK INST BIOCHEM, D-82152 MARTINSRIED, GERMANY; UNIV FREIBURG, INST ORGAN CHEM & BIOCHEM, D-79104 FREIBURG, GERMANY; UNIV AUTONOMA BARCELONA, INST BIOL FONAMENTAL, E-08193 BARCELONA, SPAIN; STANFORD UNIV, SCH MED, DEPT CELL BIOL, BECKMAN LABS STRUCT BIOL, STANFORD, CA, 94305
COUNTRY OF AUTHOR: GERMANY; SPAIN; USA
SOURCE: PROTEIN SCIENCE, (MAY 1995) Vol. 4, No. 5, pp. 823-840. ISSN: 0961-8368.
DOCUMENT TYPE: General Review; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 136

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The three-dimensional structures of the **zinc** endopeptidases **human** neutrophil collagenase, adamalysin II from rattle snake venom, alkaline **proteinase** from Pseudomonas aeruginosa, and astacin from crayfish are topologically similar, with respect to a five-stranded P-sheet and three cu-helices arranged in typical sequential order. The four proteins exhibit the characteristic consensus motif

HEXXHXXGXXH, whose three histidine residues are involved in binding of the catalytically essential **zinc** ion. Moreover, they all share a conserved methionine residue beneath the active site metal as part of a superimposable ''Met-turn.'' This structural relationship is supported by a sequence alignment performed on the basis of topological equivalence showing faint but distinct sequential similarity The alkaline **proteinase** is about equally distant (26% sequence identity) to both **human** neutrophil collagenase and astacin and a little further away from adamalysin II (17% identity). The pairs astacin/adamalysin II, astacin/**human** neutrophil collagenase, and adamalysin II/**human** neutrophil collagenase exhibit sequence identities of 16%, 14%, and 13%, respectively. Therefore, the corresponding four distinct families of **zinc peptidases** , the astacins, the matrix metalloproteinases (**matrixins**, collagenases), the adamalysins/reprolysins (snake venom **proteinases**/reproductive tract proteins), and the serralysins (large bacterial **proteases** from Serratia, Erwinia, and Pseudomonas) appear to have originated by divergent evolution from a common ancestor and form a superfamily of proteolytic enzymes for which the designation ''metzincins'' has been proposed. There is also a faint but significant structural relationship of the metzincins to the thermolysin-like enzymes, which share the truncated **zinc**-binding motif HEXXH and, moreover, similar topologies in their N-terminal domains.

L9 ANSWER 28 OF 31 MEDLINE on STN

ACCESSION NUMBER: 96173003 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8590015
TITLE: Structure of full-length porcine synovial collagenase reveals a C-terminal domain containing a calcium-linked, four-bladed beta-propeller.
AUTHOR: Li J; Brick P; O'Hare M C; Skarzynski T; Lloyd L F; Curry V A; Clark I M; Bigg H F; Hazleman B L; Cawston T E; +
CORPORATE SOURCE: Blackert Laboratory, Imperial College, London, UK.
SOURCE: Structure (London, England), (1995 Jun 15) 3 (6) 541-9. Journal code: 9418985. ISSN: 0969-2126.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199603
ENTRY DATE: Entered STN: 19960404
Last Updated on STN: 20000303
Entered Medline: 19960327

AB BACKGROUND: The collagenases are members of the family of **zinc** -dependent enzymes known as the matrix metalloproteinases (MMPs). They are the only **proteinases** that specifically cleave the collagen triple helix, and are important in a large number of physiological and pathological processes. Structures are known for the N-terminal catalytic' domain of collagenases MMP-1 and MMP-8 and of stromelysin (MMP-3). This catalytic domain alone, which comprises about 150 amino acids, has no activity against collagen. A second domain, of 200 amino acids, is homologous to haemopexin, a haem-binding glycoprotein. RESULTS: The crystal structure of full-length MMP-1 at 2.5 A resolution gives an R-factor of 21.7%. Two domains are connected by an exposed proline-rich linker of 17 amino acids, which is probably flexible and has no secondary structure. The catalytic domain resembles those previously observed, and contains three calcium-binding sites. The haemopexin-like domain contains four units of four-stranded antiparallel beta sheet stabilized on its fourfold axis by a cation, which is probably calcium. The domain constitutes a four-bladed beta-propeller structure in which the blades are scarcely twisted. CONCLUSIONS: The exposed linker accounts for the difficulty in purifying full-length collagenase. The C-terminal domain provides a structural model for haemopexin and its homologues. It controls the specificity of MMPs, affecting both substrate and inhibitor

binding, although its role remains obscure. These structural results should aid the design of site-specific mutants which will reveal further details of the specificity mechanism.

L9 ANSWER 29 OF 31 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 93:351599 SCISEARCH
THE GENUINE ARTICLE: LE436
TITLE: IMPLICATIONS OF THE 3-DIMENSIONAL STRUCTURE OF ASTACIN FOR THE STRUCTURE AND FUNCTION OF THE ASTACIN FAMILY OF **ZINC**-ENDOPEPTIDASES
AUTHOR: STOCKER W (Reprint); GOMISRUTH F X; BODE W; ZWILLING R
CORPORATE SOURCE: UNIV HEIDELBERG, INST ZOOL, FACHRICHTUNG PHYSIOL, NEUENHEIMER FELD 230, W-6900 HEIDELBERG 1, GERMANY (Reprint); MAX PLANCK INST BIOCHEM, W-8033 MARTINSRIED, GERMANY
COUNTRY OF AUTHOR: GERMANY
SOURCE: EUROPEAN JOURNAL OF BIOCHEMISTRY, (15 MAY 1993) Vol. 214, No. 1, pp. 215-231.
ISSN: 0014-2956.
DOCUMENT TYPE: General Review; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 113

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Astacin, a **zinc**-endopeptidase from the crayfish Astacus astacus L., represents a structurally

distinct group of metalloproteinases termed the 'astacin family'. This protein family includes oligomeric membrane-bound proteins with **zinc proteinase** domains found in rodent kidneys (meprins A and B) and **human** small intestine (N-benzoyl-L-tyrosyl-4-aminobenzoate hydrolase). Another branch of this family comprises morphogenetically active proteins, which induce bone formation (**human** bone morphogenetic protein 1), or which play specific roles during the embryonic development of amphibians, fishes, echinoderms, and insects.

The X-ray crystal structure of astacin has recently been solved to a resolution of 0.18 nm [Bode et al. (1992) Nature 358,164-1671. This structure is different from hitherto known metalloendopeptidase structures and has been used in the present study to analyze the structures of the other members of the astacin protein family.

Computer-assisted modelling of the proteolytic domain of the alpha-subunit of meprin A based on the astacin structure is possible if five single and one double residue deletions and three single residue insertions are implied. The **proteinase** domains of the other astacins can be included in the model-based sequence alignment by introducing additionally three insertions and one deletion. All of these insertions and deletions are observed in loop segments connecting regular secondary structure elements and should leave the overall structure unaltered.

The topology of residues forming the **zinc**-binding active site of astacin corresponds to almost identical arrangements in all other astacins, suggesting that these are likewise metalloproteinases. Based on this similarity, it is proposed that the active-site metal ion of the astacins is penta-coordinated by three histidine residues, a tyrosine residue and a water molecule in a trigonal bipyramidal geometry. Other remarkable common features are a hydrophobic cluster in the N-terminal domain and a conserved, solvent-filled cavity buried in the C-terminal domain. Most interestingly, the amino-termini of all astacins can be modelled to start in a corresponding internal water cavity as seen in the astacin template, where the terminal alanine residue forms a water-linked salt bridge to Glu103, directly adjacent to His102, the third **zinc** ligand. Therefore, an activation mechanism for the astacins reminiscent of that of the trypsin-like **proteinases** had been suggested, which

now seems to be probable also for the other astacins.

Besides these common traits, there are some minor differences which may have important consequences on the function of the astacins. A striking example are variations in the presumed S', substrate-binding site, which binds the amino acid side chain on the C-terminal side of the scissile bond of the substrate. In this subsite the crayfish **proteinase** astacin prefers short, uncharged residues. By contrast, meprin A accepts bulky, charged side chains in this position. This difference presumably can be explained by both the replacement of Pro176 (astacin) by Gly176 (all other astacins) and the concomitant deletion of Tyr177 (all other astacins).

Interestingly, the three imidazole-**zinc** ligands are included in a consensus sequence (HEXXHX-XGXXH) which the astacins share with otherwise sequentially unrelated enzymes like vertebrate matrix metalloproteinases (**matrixins**), snake venom haemorrhagic toxins and certain large bacterial enzymes. Hence, a **zinc** ligation similar to that seen in astacin is probable also for these **proteinases**.

L9 ANSWER 30 OF 31 MEDLINE on STN DUPLICATE 6

ACCESSION NUMBER: 93125388 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1480063
TITLE: Primary structure and function of stromelysin/transin in cartilage matrix turnover.
AUTHOR: Wilhelm S M; Wunderlich D; Maniglia C A; Eisen A Z; Goldberg G I
CORPORATE SOURCE: Institute for Arthritis and Autoimmunity, Miles Research Center, West Haven, CT 06516.
SOURCE: Matrix (Stuttgart, Germany). Supplement, (1992) 1 37-44. Journal code: 9312140. ISSN: 0940-1199.
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AB Stromelysin/Transin is a member of the matrix metalloprotease gene family. This metalloprotease is synthesized as a preproenzyme with a predicted size of 53,977 Da including a 17 amino acid signal peptide. Prostromelysin is secreted from normal and transformed cells in two forms with apparent molecular masses on NaDodSO4 gels of 60 and 58-kDa. The minor 60-kDa species contains N-linked oligosaccharide(s). Stromelysin consists of three domains the amino terminal propeptide(s) domain contains the tribasic amino acid sequence RRK which is important in the proteolytic activation of this zymogen by trypsin-like serine **proteases**. The second domain consists of the catalytic domain which contains the **zinc** binding site. The carboxyl-terminal **hemopexin** domain has no known function and can be removed without a loss of enzymatic activity. Stromelysin has a broad range of substrate specificity including proteoglycans, casein, fibronectin, laminin, native type IV and IX collagen and gelatin but not type I collagen. In the presence of trypsin or plasmin, catalytic amounts of this enzyme can also fully activate interstitial fibroblast collagenase. We have developed a panel of monoclonal antibodies against stromelysin which will be useful for the tissue localization of the various species of this enzyme in tissues. In addition, we have demonstrated that either **human** rIL-1 (alpha) or rTNF (alpha) can stimulate the **expression** of this enzyme in cultured bovine articular cartilage at least 10-fold. Based on western blot analysis, the zymogen form of the enzyme was the major enzyme species detected in either the media or cartilage matrix compartments of cytokine treated cultures.

L9 ANSWER 31 OF 31 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 91:264688 SCISEARCH
THE GENUINE ARTICLE: FK111
TITLE: MATRIX METALLOPROTEINASES AND THEIR INHIBITORS IN CONNECTIVE-TISSUE REMODELING
AUTHOR: WOESSNER J F (Reprint)
CORPORATE SOURCE: UNIV MIAMI, SCH MED, DEPT BIOCHEM & MOLEC BIOL, R 127, POB 016960, MIAMI, FL, 33101 (Reprint)
COUNTRY OF AUTHOR: USA
SOURCE: FASEB JOURNAL, (1991) Vol. 5, No. 8, pp. 2145-2154.
DOCUMENT TYPE: General Review; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 78

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Matrix metalloproteinases are an important group of **zinc** enzymes responsible for degradation of the extracellular matrix components such as collagen and proteoglycans in normal embryogenesis and remodeling and in many disease processes such as arthritis,cancer, periodontitis, and osteoporosis. A **matrixin** family is defined, comprising at least seven members that range in size from M(r) 28000 to 92000 and are related in gene sequence to collagenase. All family members are secreted as zymogens that lose peptides of about 10,000 daltons upon activation. Latency is due to a conserved cysteine that binds to **zinc** at the active center. Latency is overcome by physical (chaotropic agents), chemical (HOCl, mercurials), and enzymatic (trypsin,plasmin) treatments that separate the cysteine residue from the **zinc**. **Expression** of the metalloproteinases is switched on by a variety of agents acting through regulatory elements of the gene, particularly the AP-1 binding site. A family of protein inhibitors of M(r) 28,500 or less binds strongly and stoichiometrically in noncovalent fashion to inhibit members of the family. The serum protein alpha-2-macroglobulin and relatives are also strongly inhibitory.

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=> d his

     (FILE 'HOME' ENTERED AT 13:16:50 ON 09 DEC 2004)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 13:17:17 ON 09 DEC 2004
L1        628423 S PEPTIDASE? OR PROTEINASE? OR PROTEASE?
L2        232488 S HUMAN AND L1
L3          1461 S ZINC(A) METALLOPROTEASE?
L4          3232 S ZINC AND L2
L5       6823002 S CLON? OR EXPRESS? OR RECOMBINANT
L6          1449 S L4 AND L5
L7          4633 S MATRIXIN OR HEMOPEXIN
L8            52 S L6 AND L7
L9            31 DUP REM L8 (21 DUPLICATES REMOVED)

=> s brain (a)cancer
L10         6055 BRAIN (A) CANCER

=> s l6 and l10
L11            1 L6 AND L10

=> d all

L11  ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2004 ACS on STN
AN   2004:162790  HCAPLUS
DN   140:212096
ED   Entered STN:  29 Feb 2004
```

TI Brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof

IN Madden, Stephen I.; Wang, Clarence J.; Cook, Brian P.; Lattera, John; Walter, Kevin

PA Genzyme Corporation, USA; The Johns Hopkins University; Cook, Brian P

SO PCT Int. Appl., 114 pp.
CODEN: PIXXD2

DT Patent

LA English

IC ICM C12N

CC 3-4 (Biochemical Genetics)
Section cross-reference(s): 1, 13, 14

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004016758	A2	20040226	WO 2003-US25614	20030815

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-403390P P 20020815
US 2003-458978P P 20030401

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004016758	ICM	C12N

AB To gain a better understanding of brain tumor angiogenesis, new techniques for isolating brain endothelial cells (ECs) and evaluating gene **expression** patterns were developed. A new version of SAGE, long-SAGE, have been employed. When transcripts from brain ECs derived from normal and malignant colorectal tissues were compared with transcripts from non-endothelial cells, genes predominantly **expressed** in the endothelium were identified. Comparison between normal- and tumor-derived endothelium revealed genes that were specifically elevated in tumor-associated brain endothelium. These results confirm that neoplastic and normal endothelium in **human** brains are distinct at the mol. level, and have significant implications for the development of anti-angiogenic therapies in the future. The genes were identified that were **expressed** at significantly higher levels in brain tumor endothelium than in normal brain endothelium. This markers were named GEMs (glioma endothelial markers). A methods to aid in diagnosing and therapy of glioma are provided.

ST brain endothelium gene **expression** tumor marker **human** therapy; glioma diagnosis gene marker anticancer screening

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(2-oxoglutarate 5-dioxygenase (lysine hydroxylase, Ehlers-Danlos syndrome type VI); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers)

IT Connexins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(43; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic

and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ARP2 (actin-related protein 2), actin-related protein 2/3, subunit 2 (34 kD); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(B3GALT6, for β-1,3-galactosyltransferase-6; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(B7 homolog 3; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Endothelin receptors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(B; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Apolipoproteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(C-I; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT CD antigens
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(CD231; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(CDC37, cell division cycle 37, Saccharomyces cerevisiae, homolog; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(CTONG2002453; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(DC2; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(DENTT (differentially **expressed** nucleolar TGF-beta 1 target protein); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(DKFZP434B 168; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(DKFZp434E1515; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(DKFZp58601624.1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(DKFZp586D0918; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(DKFZp761H221; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(DKFZp762A227; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(DNA segment onchromosome X and Y (unique) 155 **expressed** sequence; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological

study); USES (Uses)
(E3 ubiquitin ligase SMIJRF1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Apolipoproteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(E; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(EUROIMAGE 1977059; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(EUROIMAGE 50374, EUROIMAGE 701679, EUROIMAGE 1035904; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(FLJ21865, FLJ10980, FLJ30634, FLJ23239; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(FLJ22215, FLJ10297, FLJ10350, FLJ20401; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(FLJ22678, FLJ12442, FLJ11863, FLJ31238, FLJ10350, FLJ39848; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(FLJ32203, FLJ22329, FLJ32424, FLJ10707; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(FLJ34888, FLJ32205, FLJ22329, FLJ23471; brain endothelial cell gene

expression patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Tumor markers
(GEMs (glioma endothelial markers); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(GTP-binding, 2; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Phosphoproteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Golgi phosphoprotein 1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(HEMBA1006926; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(HLA class II region **expressed** gene KE2; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Hermansky-Pudlak syndrome 4; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Hs 54828; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Hs111988, Hs112238, Hs127824, Hs296234,; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Hs16450, Hs272106; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Hs299251, Hs311780; Hs212191, Hs328774; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Huntingtin interacting protein K; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Myosins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(I, D; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Profilins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(I, non-muscle; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Insulin-like growth factor-binding proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IGFBP-3; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Insulin-like growth factor-binding proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IGFBP-5; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Insulin-like growth factor-binding proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IGFBP-7; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Annexins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(II; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological

study); USES (Uses)
(IMAGE 3342825, MGC:17337 IMAGE 4213591; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IMAGE 3908182; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IMAGE 4845226; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ITB 1_**HUMAN** integrin beta-1 precursor; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Jagged 1, Alagille syndrome; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(KIAA0404, KIAA0726, KIAA0470, KIAA0685, KIAA1887; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(KIDNE2004864; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Ribosomal proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(L10, L10a; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Ribosomal proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(L10; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Ribosomal proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(L13; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Ribosomal proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(L27; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Ribosomal proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(L38; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Ribosomal proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(L45, mitochondrial; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(LAMP (lysosome-associated membrane protein), lysosome-associated multispanning membrane protein-5; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Transcription factors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(LDB2 (LIM domain-binding 2); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Lipoprotein receptors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(LDL, acetylated; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(LNG03128; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(LOC57333; brain endothelial cell gene **expression** patterns,

tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(LOC88745; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Blood-group substances
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Lutheran, Auberger b antigen included; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Antigens
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MAA (melanoma-associated antigen), recognized by cytotoxic T lymphocytes; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Antigens
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MAA (melanoma-associated antigen); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MACMARCKS (macrophage myristoylated alanine-rich C kinase substrate); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MAP1 (microtubule-associated protein 1); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MGC4677; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Histocompatibility antigens
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MHC (major histocompatibility complex), class I; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(NS1-binding; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(NT2NE2017332; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Transcription factors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(PBX2 (pre-B-cell leukemia transcription factor 2); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(PLACE6003038; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(PRO0628; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Splicing factors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(PSF (PTB-associated splicing factor); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(PTEN-induced putative kinase 1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Quiescin Q6; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(RAG-1 (recombination-activating gene, 1), Rag C; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug

screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(RGS-12 (regulator of G-protein signaling 12); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(RING finger, double ring-finger; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(RING finger, ring finger protein 40; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Ribosomal proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(S16; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Ribosomal proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(S19; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Ribosomal proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(S9; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Genetic methods
(SAGE, for serial anal. of gene **expression**; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(SEC24 (Saccharomyces cerevisiae) related gene family, member A; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Splicing factors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(SFRS6 (splicing factor, arginine/serine-rich 6); brain endothelial

cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(SKMUS2000954; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Transcription factors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(SOX4; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(SPLEN2014669; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(SREC; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Receptors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(SSR (signal sequence receptor), GEM (glioma endothelial marker) for; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Receptors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(SSR (signal sequence receptor), translocon-associated protein δ, GEM (glioma endothelial marker) for; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(SSR4; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(T21371, F25H8.3; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic

use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TBP-associated factor, 28 kD; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Tyrosine kinase receptors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TEK tyrosine kinase-like; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Transcription factors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TLE (transducin-like enhancer corepressor), transducin-like enhancer of split 2; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TM4SF2 (transmembrane 4 superfamily member 2); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TNF-induced; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Growth factor receptors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TNFR superfamily, member 16; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Fas antigen
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TNFRSF6-associated via death domain; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TRAPD; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Initiation factors (protein formation)
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Tif (translation initiation factor); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(U6 snRNA-associated Sm-like protein LSm7; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Myosins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(X; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Immunostimulants
(adjuvants; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Brain, neoplasm
(angiogenesis; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Radiotherapy
(antibody-directed; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Porins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(aquaporin 1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Transcription factors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(binding to IGHM enhancer 3; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Antitumor agents
Biomarkers (biological responses)
DNA microarray technology
Drug screening
Gene therapy
Human
Mammalia
Molecular **cloning**
Susceptibility (genetic)
(brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Leukemia inhibitory factor
Macrophage inflammatory protein 1α
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(brain endothelial cell gene **expression** patterns,

tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Biglycans
CD59 (antigen)
G protein-coupled receptors
Insulin receptors
Osteonectin
Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT mRNA
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Gene **expression** profiles, animal
(by SAGE; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Diagnosis
(**cancer**; **brain** endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(cell membrane glycoprotein, 11,0000 M(r) (surface antigen); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(chromosome 21 open reading frame 25; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(chromosome 22 open reading frame 5; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(coactosin-like; brain endothelial cell gene **expression**

patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(coagulation factor II (thrombin) receptor-like 3; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(coagulation factor III (thromboplastin, tissue factor); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(cysteine-rich, cysteine-rich protein 2; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(cysteine-rich, secreted, acidic; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Toxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cytotoxins, antibody conjugates; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(dJ181N3.1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(degenerative spermatocyte (homolog Drosophila, lipid desaturase); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Neuroglia, neoplasm
(diagnosis; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(dihydropyrimidinase-like 3; brain endothelial cell gene

expression patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(dorfin; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(dysferlin; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Elongation factors (protein formation)
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(eEF-2; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(endoplasmic reticulum associated protein 140 kDa; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(endothelial (venous malformations, multiple cutaneous and mucosal); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Angiogenesis
(endothelialization; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Blood vessel
(endothelium, brain; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Brain
(endothelium; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Enzymes, biological studies
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(excision repair cross-complementing rodent repair deficiency complementation group 1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**expressed** in thyroid; brain endothelial cell gene

expression patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT cDNA sequences
(for glioma endothelial markers; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Agglutinins and Lectins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(galectin-8; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(gap junction-specific; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(glioma endothelial marker 1 precursor; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(glioma-associated; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Glycophorins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(glycophorin C; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(heme oxygenase (decycling) 1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteoglycans, biological studies
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(heparitin sulfate-containing, 2; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(homolog of Drosophila E(sp 1); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Immunoassay
(immunoblotting; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Immunoassay
(immunohistochem.; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(inhibin, beta B (activin AB beta polypeptide); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Drug delivery systems
(injections, i.m.; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(insig-1 (insulin-induced gene 1); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(integrin beta 4 binding; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(labeled; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(lamins, lamin A/C; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(latexin; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use)
(limb girdle muscular dystrophy 2B (autosomal recessive); brain

endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(lysyl oxidase-like 2; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(macrophage migration inhibitory factor (glycosylation-inhibiting factor); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Nucleic acid hybridization
(microarray; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Diagnosis
(mol.; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nuclear factor (erythroid-derived 2)-like2; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Epitopes
(of glioma-associated protein; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ortholog of rat vacuole membrane protein 1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(p53-induced; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteoglycans, biological studies
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(perlecans; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Receptors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological

study); USES (Uses)
(plexin, B2; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(procollagen-lysine; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(prosaposins, variant Gaucher disease and variant metachromatic leukodystrophy; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(prostate tumor overexpressed gene 1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(protective protein for β-galactosidase (galactosialidosis); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Ras proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ras homolog gene family, member A; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(retinoic acid-induced 14; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(schwannomin-interacting protein 1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(similar to RIKEN cDNA 2310012N15, 5730528L13; brain endothelial cell

gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Ribonucleoproteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(small nuclear ribonucleoprotein polypeptide B; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(smoothelin; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Transport proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(solute carrier family 29 (nucleoside transporters), member 1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(sprouty (Drosophila) homolog 4; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(sudD (suppressor of bimD6, Aspergillus nidulans) homolog; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Tumor necrosis factor receptors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(superfamily, member 12 (translocating chain-association membrane protein); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Antigens
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(surface, Thy-i; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(synaptopodin; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Surgery
(therapy after surgical removal of glioma; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(translocase of inner mitochondrial membrane 17 homolog A (yeast); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(tuftelin-interacting; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT EST (**expressed** sequence tag)
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tumor marker gene identified by; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(tumor suppressor deleted in oral cancer-related 1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Antigens
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(tumor-associated, T-cell lymphoma-associated, cutaneous, se20-4; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Collagens, biological studies
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(type I; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Collagens, biological studies
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(type IV, α1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Collagens, biological studies
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(type VI, α2; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ubiquinol-cytochrome c reductase hinge protein; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(v-akt murine thymoma viral oncogene homolog 2; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Transcription factors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(v-ets, v-ets avian erythroblastosis virus E26 oncogene homolog 1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**zinc** finger-containing, 144, Mel-18; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Fibronectin receptors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(α polypeptide; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Integrins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(α10; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Laminins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(α5; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Integrins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(α5; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Transforming growth factors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(β1-; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Catenins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(γ-; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT Laminins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(γ3; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 37256-36-3, NADH dehydrogenase (ubiquinone)
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1 alpha, subcomplex, 7(14.5 kD, B14.5a); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 110071-61-9
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 105238-46-8, Macropain
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(26S subunit; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 9013-66-5, Glutathione peroxidase
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(4, (phospholipid hydroperoxidase); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 9000-83-3, ATPase
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(8; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 9028-04-0, NADH-coenzyme Q reductase
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Fe-S protein 7 (20 kD); brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 9014-24-8
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological

study); USES (Uses)
(II, TAF11; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 9001-12-1, Matrix metalloproteinase 1 9030-22-2, Uridine phosphorylase 9039-53-6, Urokinase 80295-32-5, Complement c 1 91448-99-6, Cystatin C 105913-11-9, Plasminogen activator 140610-48-6, Matrix metalloproteinase 10 300865-11-6, Protein tyrosine phosphatase, non-receptor type 1 324751-96-4, Stanniocalcin 2 324752-01-4, Stanniocalcin 1 405202-87-1, Mitogen-activated protein kinase kinase kinase 11
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 95076-93-0, Peptidylprolyl isomerase
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(cyclophilin A; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 146480-36-6, Matrix metalloproteinase 9
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(gelatinase B, 92 kD gelatinase, 92 kD type IV collagenase; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 161384-17-4, Matrix metalloproteinase 14
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(membrane-inserted; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 664382-60-9 664382-61-0 664382-62-1 664382-63-2 664382-64-3
664382-65-4 664382-66-5 664382-67-6 664382-68-7 664382-69-8
664382-70-1 664382-71-2 664382-72-3 664382-73-4 664382-74-5
664382-75-6 664382-76-7 664382-77-8 664382-78-9 664382-79-0
664382-80-3 664382-81-4 664382-82-5 664382-83-6 664382-84-7
664382-85-8 664382-86-9 664382-87-0 664382-88-1 664382-89-2
664382-90-5 664382-91-6 664382-92-7 664382-93-8 664382-94-9
664382-95-0 664382-96-1 664382-97-2 664382-98-3 664382-99-4
664383-00-0 664383-01-1 664383-02-2 664383-03-3 664383-04-4
664383-05-5 664383-06-6 664383-07-7 664383-08-8 664383-09-9
664383-10-2 664383-11-3 664383-12-4 664383-13-5 664383-14-6
664383-15-7 664383-16-8 664383-17-9 664383-18-0 664383-19-1
664383-20-4 664383-21-5 664383-22-6 664383-23-7 664383-24-8
664383-25-9 664383-26-0 664383-27-1 664383-28-2 664383-29-3
664383-30-6 664383-31-7 664383-32-8 664383-33-9 664383-34-0
664383-35-1 664383-36-2 664383-37-3 664383-38-4 664383-39-5
664383-40-8 664383-41-9 664383-42-0 664383-43-1 664383-44-2
664383-45-3 664383-46-4 664383-47-5 664383-48-6 664383-49-7
664383-50-0 664383-51-1 664383-52-2 664383-53-3 664383-54-4
664383-55-5 664383-56-6 664383-57-7 664383-58-8 664383-59-9
664383-60-2 664383-61-3 664383-62-4 664383-63-5 664383-64-6
664383-65-7 664383-66-8 664383-67-9 664383-68-0 664383-69-1
664383-70-4 664383-71-5 664383-72-6 664383-73-7 664383-74-8
664383-75-9 664383-76-0 664383-77-1 664383-78-2 664383-79-3
664383-80-6 664383-81-7 664383-82-8 664383-83-9 664383-84-0
664383-85-1 664383-86-2 664383-87-3 664383-88-4 664383-89-5

664383-90-8 664383-91-9 664383-92-0 664383-93-1 664383-94-2
664383-95-3 664383-96-4 664383-97-5 664383-98-6 664383-99-7
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RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nucleotide sequence; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

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RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nucleotide sequence; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 664387-26-2 664387-27-3 664387-28-4 664387-29-5 664387-30-8
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664387-66-0
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nucleotide sequence; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

IT 149371-18-6, Legumain
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**protease**, cysteine, 1; brain endothelial cell gene **expression** patterns, tumor-associated brain endothelium markers, and diagnostic, therapeutic and anti-cancer drug screening uses thereof)

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=> d his

     (FILE 'HOME' ENTERED AT 13:16:50 ON 09 DEC 2004)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 13:17:17 ON 09 DEC 2004
L1        628423 S PEPTIDASE? OR PROTEINASE? OR PROTEASE?
L2        232488 S HUMAN AND L1
L3          1461 S ZINC(A) METALLOPROTEASE?
L4          3232 S ZINC AND L2
L5       6823002 S CLON? OR EXPRESS? OR RECOMBINANT
L6          1449 S L4 AND L5
L7          4633 S MATRIXIN OR HEMOPEXIN
L8            52 S L6 AND L7
L9            31 DUP REM L8 (21 DUPLICATES REMOVED)
L10         6055 S BRAIN (A)CANCER
L11            1 S L6 AND L10

=> s zinc (a)l1
L12         924 ZINC (A) L1

=> s l12 and l10
L13           0 L12 AND L10
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=> s l5 and l1`2
L14           1 L5 AND L1`2

=> s l5 and l12
L15         169 L5 AND L12

=> s l7 and l15
L16           3 L7 AND L15

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PROCESSING COMPLETED FOR L16
L17           3 DUP REM L16 (0 DUPLICATES REMOVED)

=> d 1-3 ibib ab

L17  ANSWER 1 OF 3  SCISEARCH  COPYRIGHT (c) 2004 The Thomson Corporation.  on
     STN
ACCESSION NUMBER:     1998:695245  SCISEARCH
THE GENUINE ARTICLE: 116RN
TITLE:                Matrix metalloproteinases: structures, evolution, and
                      diversification
AUTHOR:               Massova I; Kotra L P; Fridman R; Mobashery S (Reprint)
CORPORATE SOURCE:     WAYNE STATE UNIV, DEPT CHEM, DETROIT, MI 48202 (Reprint);
                      WAYNE STATE UNIV, DEPT CHEM, DETROIT, MI 48202; WAYNE
                      STATE UNIV, DEPT PATHOL, DETROIT, MI 48202; WAYNE STATE
                      UNIV, KARMANOS CANC INST, DETROIT, MI 48202
COUNTRY OF AUTHOR:    USA
SOURCE:               FASEB JOURNAL, (SEP 1998) Vol. 12, No. 12, pp. 1075-1095.
                      Publisher: FEDERATION AMER SOC EXP BIOL, 9650 ROCKVILLE
                      PIKE, BETHESDA, MD 20814-3998.
                      ISSN: 0892-6638.
DOCUMENT TYPE:        General Review; Journal
FILE SEGMENT:         LIFE
LANGUAGE:             English
REFERENCE COUNT:      58
                     *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*
AB       A comprehensive sequence alignment of 64 members of the family of
     matrix metalloproteinases (MMPs) for the entire sequences, and
     subsequently the catalytic and the hemopexin-like domains, have
     been performed. The 64 MMPs were selected from plants, invertebrates, and
     vertebrates. The analyses disclosed that as many as 23 distinct
     subfamilies of these proteins are known to exist. Information from the
     sequence alignments: was correlated with structures, both crystallographic
     as well as computational, of the catalytic domains for the 23
     representative members of the MMP family. A survey of the metal binding
     sites and two loops containing variable sequences of amino acids, which
     are important for substrate interactions, are discussed. The collective
     data support the proposal that the assembly of the domains into
     multidomain enzymes was likely to be an early evolutionary event. This:was
     followed by diversification, perhaps in parallel among the MMPs, in a
     subsequent evolutionary time scale. Analysis indicates that a retrograde
     structure simplification may have accounted for the evolution of MMPs with
     simple domain constituents, such as matrilysin, from the larger and more
     elaborate enzymes.

L17  ANSWER 2 OF 3  SCISEARCH  COPYRIGHT (c) 2004 The Thomson Corporation.  on
     STN
ACCESSION NUMBER:     95:330834  SCISEARCH
THE GENUINE ARTICLE: QW981
TITLE:                THE METZINCINS - TOPOLOGICAL AND SEQUENTIAL RELATIONS
                      BETWEEN THE ASTACINS, ADAMALYSINS, SERRALYSINS, AND
                      MATRIXINS (COLLAGENASES) DEFINE A SUPERFAMILY OF
                      ZINC-PEPTIDASES
```

AUTHOR: STOCKER W (Reprint); GRAMS F; BAUMANN U; REINEMER P; GOMISRUTH F X; MCKAY D B; BODE W

CORPORATE SOURCE: UNIV HEIDELBERG, INST ZOOL, NEUENHEIMER FELD 230, D-69120 HEIDELBERG, GERMANY (Reprint); MAX PLANCK INST BIOCHEM, D-82152 MARTINSRIED, GERMANY; UNIV FREIBURG, INST ORGAN CHEM & BIOCHEM, D-79104 FREIBURG, GERMANY; UNIV AUTONOMA BARCELONA, INST BIOL FONAMENTAL, E-08193 BARCELONA, SPAIN; STANFORD UNIV, SCH MED, DEPT CELL BIOL, BECKMAN LABS STRUCT BIOL, STANFORD, CA, 94305

COUNTRY OF AUTHOR: GERMANY; SPAIN; USA

SOURCE: PROTEIN SCIENCE, (MAY 1995) Vol. 4, No. 5, pp. 823-840.
ISSN: 0961-8368.

DOCUMENT TYPE: General Review; Journal

FILE SEGMENT: LIFE

LANGUAGE: ENGLISH

REFERENCE COUNT: 136

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The three-dimensional structures of the zinc endopeptidases human neutrophil collagenase, adamalysin II from rattle snake venom, alkaline proteinase from Pseudomonas aeruginosa, and astacin from crayfish are topologically similar, with respect to a five-stranded P-sheet and three cu-helices arranged in typical sequential order. The four proteins exhibit the characteristic consensus motif HEXXHXXGXXH, whose three histidine residues are involved in binding of the catalytically essential zinc ion. Moreover, they all share a conserved methionine residue beneath the active site metal as part of a superimposable ''Met-turn.'' This structural relationship is supported by a sequence alignment performed on the basis of topological equivalence showing faint but distinct sequential similarity The alkaline proteinase is about equally distant (26% sequence identity) to both human neutrophil collagenase and astacin and a little further away from adamalysin II (17% identity). The pairs astacin/adamalysin II, astacin/human neutrophil collagenase, and adamalysin II/human neutrophil collagenase exhibit sequence identities of 16%, 14%, and 13%, respectively. Therefore, the corresponding four distinct families of **zinc peptidases**, the astacins, the matrix metalloproteinases (**matrixins**, collagenases), the adamalysins/reprolysins (snake venom proteinases/reproductive tract proteins), and the serralysins (large bacterial proteases from Serratia, Erwinia, and Pseudomonas) appear to have originated by divergent evolution from a common ancestor and form a superfamily of proteolytic enzymes for which the designation ''metzincins'' has been proposed. There is also a faint but significant structural relationship of the metzincins to the thermolysin-like enzymes, which share the truncated zinc-binding motif HEXXH and, moreover, similar topologies in their N-terminal domains.

L17 ANSWER 3 OF 3 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 93:351599 SCISEARCH

THE GENUINE ARTICLE: LE436

TITLE: IMPLICATIONS OF THE 3-DIMENSIONAL STRUCTURE OF ASTACIN FOR THE STRUCTURE AND FUNCTION OF THE ASTACIN FAMILY OF ZINC-ENDOPEPTIDASES

AUTHOR: STOCKER W (Reprint); GOMISRUTH F X; BODE W; ZWILLING R

CORPORATE SOURCE: UNIV HEIDELBERG, INST ZOOL, FACHRICHTUNG PHYSIOL, NEUENHEIMER FELD 230, W-6900 HEIDELBERG 1, GERMANY (Reprint); MAX PLANCK INST BIOCHEM, W-8033 MARTINSRIED, GERMANY

COUNTRY OF AUTHOR: GERMANY

SOURCE: EUROPEAN JOURNAL OF BIOCHEMISTRY, (15 MAY 1993) Vol. 214, No. 1, pp. 215-231.
ISSN: 0014-2956.

DOCUMENT TYPE: General Review; Journal

FILE SEGMENT: LIFE

LANGUAGE: ENGLISH

REFERENCE COUNT: 113

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Astacin, a zinc-endopeptidase from the crayfish Astacus astacus L., represents a structurally

distinct group of metalloproteinases termed the 'astacin family'. This protein family includes oligomeric membrane-bound proteins with **zinc proteinase** domains found in rodent kidneys (meprins A and B) and human small intestine (N-benzoyl-L-tyrosyl-4-aminobenzoate hydrolase). Another branch of this family comprises morphogenetically active proteins, which induce bone formation (human bone morphogenetic protein 1), or which play specific roles during the embryonic development of amphibians, fishes, echinoderms, and insects.

The X-ray crystal structure of astacin has recently been solved to a resolution of 0.18 nm [Bode et al. (1992) Nature 358,164-1671. This structure is different from hitherto known metalloendopeptidase structures and has been used in the present study to analyze the structures of the other members of the astacin protein family.

Computer-assisted modelling of the proteolytic domain of the alpha-subunit of meprin A based on the astacin structure is possible if five single and one double residue deletions and three single residue insertions are implied. The proteinase domains of the other astacins can be included in the model-based sequence alignment by introducing additionally three insertions and one deletion. All of these insertions and deletions are observed in loop segments connecting regular secondary structure elements and should leave the overall structure unaltered.

The topology of residues forming the zinc-binding active site of astacin corresponds to almost identical arrangements in all other astacins, suggesting that these are likewise metalloproteinases. Based on this similarity, it is proposed that the active-site metal ion of the astacins is penta-coordinated by three histidine residues, a tyrosine residue and a water molecule in a trigonal bipyramidal geometry. Other remarkable common features are a hydrophobic cluster in the N-terminal domain and a conserved, solvent-filled cavity buried in the C-terminal domain. Most interestingly, the amino-termini of all astacins can be modelled to start in a corresponding internal water cavity as seen in the astacin template, where the terminal alanine residue forms a water-linked salt bridge to Glu103, directly adjacent to His102, the third zinc ligand. Therefore, an activation mechanism for the astacins reminiscent of that of the trypsin-like proteinases had been suggested, which now seems to be probable also for the other astacins.

Besides these common traits, there are some minor differences which may have important consequences on the function of the astacins. A striking example are variations in the presumed S', substrate-binding site, which binds the amino acid side chain on the C-terminal side of the scissile bond of the substrate. In this subsite the crayfish proteinase astacin prefers short, uncharged residues. By contrast, meprin A accepts bulky, charged side chains in this position. This difference presumably can be explained by both the replacement of Pro176 (astacin) by Gly176 (all other astacins) and the concomitant deletion of Tyr177 (all other astacins).

Interestingly, the three imidazole-zinc ligands are included in a consensus sequence (HEXXHX-XGXXH) which the astacins share with otherwise sequentially unrelated enzymes like vertebrate matrix metalloproteinases (**matrixins**), snake venom haemorrhagic toxins and certain large bacterial enzymes. Hence, a zinc ligation similar to that seen in astacin is probable also for these proteinases.

=> d his

(FILE 'HOME' ENTERED AT 13:16:50 ON 09 DEC 2004)

FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS, LIFESCI' ENTERED AT 13:17:17 ON 09 DEC 2004

L1 628423 S PEPTIDASE? OR PROTEINASE? OR PROTEASE?

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L2        232488 S HUMAN AND L1
L3          1461 S ZINC(A) METALLOPROTEASE?
L4          3232 S ZINC AND L2
L5       6823002 S CLON? OR EXPRESS? OR RECOMBINANT
L6          1449 S L4 AND L5
L7          4633 S MATRIXIN OR HEMOPEXIN
L8            52 S L6 AND L7
L9            31 DUP REM L8 (21 DUPLICATES REMOVED)
L10         6055 S BRAIN (A)CANCER
L11            1 S L6 AND L10
L12          924 S ZINC (A)L1
L13            0 S L12 AND L10
L14            1 S L5 AND L1`2
L15          169 S L5 AND L12
L16            3 S L7 AND L15
L17            3 DUP REM L16 (0 DUPLICATES REMOVED)

=> dup rem l15
PROCESSING COMPLETED FOR L15
L18           87 DUP REM L15 (82 DUPLICATES REMOVED)

=> d 1-87 ibib

L18  ANSWER 1 OF 87     MEDLINE on STN                    DUPLICATE 1
ACCESSION NUMBER:    2004260200     MEDLINE
DOCUMENT NUMBER:     PubMed ID: 15158771
TITLE:               Down-regulation of gp63 in Leishmania amazonensis reduces
                     its early development in Lutzomyia longipalpis.
AUTHOR:              Hajmova Martina; Chang Kwang-Poo; Kolli Bala; Volf Petr
CORPORATE SOURCE:    Department of Parasitology, Faculty of Science, Charles
                     University, Vinicna 7, Prague 2, Czech Republic.
CONTRACT NUMBER:     AI-20486 (NIAID)
SOURCE:              Microbes and infection / Institut Pasteur, (2004 Jun) 6 (7)
                     646-9.
                     Journal code: 100883508. ISSN: 1286-4579.
PUB. COUNTRY:        France
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
ENTRY MONTH:         200408
ENTRY DATE:          Entered STN: 20040526
                     Last Updated on STN: 20040813
                     Entered Medline: 20040812

L18  ANSWER 2 OF 87  EMBASE  COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
     on STN
ACCESSION NUMBER:    2004259943  EMBASE
TITLE:               Thermal stabilization of penicillolysin, a thermolabile 19
                     kDa Zn (2+)-protease, obtained by site-directed
                     mutagenesis.
AUTHOR:              Doi Y.; Akiyama H.; Yamada Y.; Ee C.E.; Lee B.R.; Ikeguchi
                     M.; Ichishima E.
CORPORATE SOURCE:    E. Ichishima, Laboratory of Molecular Enzymology, Graduate
                     School of Bioengineering, Soka University, Hachioji, Tokyo
                     192-8577, Japan. ichisima@t.soka.ac.jp
SOURCE:              Protein Engineering, Design and Selection, (2004) 17/3
                     (261-266).
                     Refs: 32
                     ISSN: 1741-0126  CODEN: PEDSBR
COUNTRY:             United Kingdom
DOCUMENT TYPE:       Journal; Article
FILE SEGMENT:        004     Microbiology
LANGUAGE:            English
SUMMARY LANGUAGE:    English
```

L18 ANSWER 3 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2004:933415 SCISEARCH
THE GENUINE ARTICLE: 862DL
TITLE: The metal-binding motif of dipeptidyl peptidase III directly influences the enzyme activity in the copper derivative of dipeptidyl peptidase III
AUTHOR: Hirose J (Reprint); Kamigakiuchi H; Iwamoto H; Fujii H; Nakai M; Takenaka M; Kataoka R; Sugahara M; Yamamoto S; Fukasawa K M
CORPORATE SOURCE: Fukuyama Univ, Fac Life Sci & Biotechnol, Dept Appl Biol Sci, Gakuen Cho, Fukuyama, Hiroshima 7290292, Japan (Reprint); Fukuyama Univ, Fac Life Sci & Biotechnol, Dept Appl Biol Sci, Fukuyama, Hiroshima 7290292, Japan; Fukuyama Univ, Fac Life Sci & Biotechnol, Dept Biotechnol, Fukuyama, Hiroshima 7290292, Japan; Matsumoto Dent Univ, Sch Dent, Dept Oral Biochem, Nagano 3990781, Japan
COUNTRY OF AUTHOR: Japan
SOURCE: ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS, (1 NOV 2004) Vol. 431, No. 1, pp. 1-8.
Publisher: ELSEVIER SCIENCE INC, 360 PARK AVE SOUTH, NEW YORK, NY 10010-1710 USA.
ISSN: 0003-9861.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 19
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 4 OF 87 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 2
ACCESSION NUMBER: 2003-24297 BIOTECHDS
TITLE: New polynucleotide encoding a **zinc protease** signature-containing protein polypeptide, useful for treating diseases, e.g. cancer, asthma, COPD or a CNS, genito-urinary, hematological or cardiovascular disorder;
involving vector-mediated gene transfer and **expression** in host cell for use in therapy
AUTHOR: LIOU J
PATENT ASSIGNEE: BAYER AG
PATENT INFO: WO 2003070929 28 Aug 2003
APPLICATION INFO: WO 2003-EP1616 18 Feb 2003
PRIORITY INFO: US 2002-405303 23 Aug 2002; US 2002-357255 19 Feb 2002
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2003-671810 [63]

L18 ANSWER 5 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2003:915500 SCISEARCH
THE GENUINE ARTICLE: 733FP
TITLE: Critical amino acids in the active site of meprin metalloproteinases for substrate and peptide bond specificity
AUTHOR: Villa J P; Bertenshaw G P; Bond J S (Reprint)
CORPORATE SOURCE: Penn State Univ, Coll Med, Dept Biochem & Mol Biol, H171, Hershey, PA 17033 USA (Reprint); Penn State Univ, Coll Med, Dept Biochem & Mol Biol, Hershey, PA 17033 USA
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (24 OCT 2003) Vol. 278, No. 43, pp. 42545-42550.
Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3996 USA.
ISSN: 0021-9258.

DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 32
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 6 OF 87 MEDLINE on STN
ACCESSION NUMBER: 2003401341 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12916979
TITLE: Phosphorus-based SAHA analogues as histone deacetylase inhibitors.
AUTHOR: Kapustin Galina V; Fejer Gyorgy; Gronlund Jennifer L; McCafferty Dewey G; Seto Edward; Etzkorn Felicia A
CORPORATE SOURCE: Department of Chemistry, Virginia Tech, Blacksburg, Virginia 24061-0212, USA.
CONTRACT NUMBER: R01 GM 65539 (NIGMS)
R01 GM52516 (NIGMS)
R01 GM58486 (NIGMS)
SOURCE: Organic letters, (2003 Aug 21) 5 (17) 3053-6.
Journal code: 100890393. ISSN: 1523-7060.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200311
ENTRY DATE: Entered STN: 20030828
Last Updated on STN: 20031104
Entered Medline: 20031103

L18 ANSWER 7 OF 87 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2003465785 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12842980
TITLE: Active amino acids of the Kell blood group protein and model of the ectodomain based on the structure of neutral endopeptidase 24.11.
AUTHOR: Lee Soohee; Debnath Asim K; Redman Colvin M
CORPORATE SOURCE: Lindsley F. Kimball Research Institute, New York Blood Center, 310 E 67th St, New York, NY 10021, USA.. solee@nybloodcenter.org
CONTRACT NUMBER: HL54459 (NHLBI)
SOURCE: Blood, (2003 Oct 15) 102 (8) 3028-34.
Journal code: 7603509. ISSN: 0006-4971.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200311
ENTRY DATE: Entered STN: 20031008
Last Updated on STN: 20031218
Entered Medline: 20031124

L18 ANSWER 8 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2003:844455 SCISEARCH
THE GENUINE ARTICLE: 723GW
TITLE: Amino acid sequence and crystal structure of BaP1, a metalloproteinase from Bothrops asper snake venom that exerts multiple tissue-damaging activities
AUTHOR: Watanabe L; Shannon J D; Valente R H; Rucavado A; Alape-Giron A; Kamiguti A S; Theakston R D G; Fox J W; Gutierrez J M (Reprint); Arni R K
CORPORATE SOURCE: Univ Costa Rica, Fac Microbiol, Inst Clodomiro Picado, San Jose, Costa Rica (Reprint); Univ Costa Rica, Escuela Med, Dept Bioquim, San Jose, Costa Rica; Univ Liverpool, Royal Liverpool Univ Hosp, Dept Haematol, Liverpool, Merseyside,

England; Univ Liverpool, Liverpool Sch Trop Med, Venom Res Unit, Liverpool L3 5QA, Merseyside, England; Fiocruz MS, Dept Fisiol & Farmacodinam, BR-21045900 Rio De Janeiro, Brazil; Univ Virginia, Hlth Sci Ctr, Dept Microbiol, Charlottesville, VA 22908 USA; UNESP, IBILCE, Dept Phys, BR-15054000 Sao Jose do Rio Preto, Brazil

COUNTRY OF AUTHOR: Costa Rica; England; Brazil; USA

SOURCE: PROTEIN SCIENCE, (OCT 2003) Vol. 12, No. 10, pp. 2273-2281

Publisher: COLD SPRING HARBOR LAB PRESS, PUBLICATIONS DEPT 500 SUNNYSIDE BLVD, WOODBURY, NY 11797-2924 USA.
ISSN: 0961-8368.

DOCUMENT TYPE: Article; Journal

LANGUAGE: English

REFERENCE COUNT: 54

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 9 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 2003:500649 SCISEARCH

THE GENUINE ARTICLE: 688ER

TITLE: Differences in the activation mechanism between the alpha and beta subunits of human meprin

AUTHOR: Becker C; Kruse M N; Slotty K A; Kohler D; Harris J R; Rosmann S; Sterchi E E; Stocker W (Reprint)

CORPORATE SOURCE: Univ Munster, Inst Zoophysiol, Hindenburgpl 55, D-48143 Munster, Germany (Reprint); Univ Munster, Inst Zoophysiol, D-48143 Munster, Germany; Univ Mainz, Inst Zool, D-55099 Mainz, Germany; Univ Bern, Inst Biochem & Mol Biol, CH-3012 Bern, Switzerland

COUNTRY OF AUTHOR: Germany; Switzerland

SOURCE: BIOLOGICAL CHEMISTRY, (MAY 2003) Vol. 384, No. 5, pp. 825-831.
Publisher: WALTER DE GRUYTER & CO, GENTHINER STRASSE 13, D-10785 BERLIN, GERMANY.
ISSN: 1431-6730.

DOCUMENT TYPE: Article; Journal

LANGUAGE: English

REFERENCE COUNT: 45

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 10 OF 87 MEDLINE on STN DUPLICATE 4

ACCESSION NUMBER: 2003408100 MEDLINE

DOCUMENT NUMBER: PubMed ID: 12946361

TITLE: X-ray structure of isoaspartyl dipeptidase from E.coli: a dinuclear **zinc peptidase** evolved from amidohydrolases.

AUTHOR: Jozic Daniela; Kaiser Jens T; Huber Robert; Bode Wolfram; Maskos Klaus

CORPORATE SOURCE: Max-Planck-Institut fur Biochemie, Abteilung Strukturforschung, Am Klopferspitz 18a, D-82152 Martinsried, Germany.

SOURCE: Journal of molecular biology, (2003 Sep 5) 332 (1) 243-56.
Journal code: 2985088R. ISSN: 0022-2836.

PUB. COUNTRY: England: United Kingdom

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

OTHER SOURCE: PDB-1PO9; PDB-1POJ; PDB-1POK

ENTRY MONTH: 200310

ENTRY DATE: Entered STN: 20030830
Last Updated on STN: 20031011
Entered Medline: 20031010

L18 ANSWER 11 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:612822 HCAPLUS
DOCUMENT NUMBER: 139:392360
TITLE: Stimulation of tissue transglutaminase activity by Clostridium botulinum neurotoxin type B
AUTHOR(S): Moon, Yu Seok; Yang, Gi-Hyeok; Rhee, Sang-Dal; Jung, Hyun Ho
CORPORATE SOURCE: Department of Biological Science, Korea Advanced Institute of Science and Technology, Yusong, Daejeon, 305-701, S. Korea
SOURCE: Journal of Microbiology (Seoul, Republic of Korea) (2003), 41(2), 161-164
CODEN: JOMIFG; ISSN: 1225-8873
PUBLISHER: Microbiological Society of Korea
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 12 OF 87 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 2003298378 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12825352
TITLE: **Cloning** and characterization of putative **zinc protease** genes of Ehrlichia canis.
AUTHOR: Teng Ching-Hao; Barr Stephen C; Chang Yung-Fu
CORPORATE SOURCE: Department of Population Medicine and Diagnostic Sciences, College of Veterinary Medicine, Cornell University, Ithaca, NY 14853, USA.
SOURCE: DNA sequence : journal of DNA sequencing and mapping, (2003 Apr) 14 (2) 109-21.
Journal code: 9107800. ISSN: 1042-5179.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200401
ENTRY DATE: Entered STN: 20030627
Last Updated on STN: 20040116
Entered Medline: 20040115

L18 ANSWER 13 OF 87 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2003:424624 BIOSIS
DOCUMENT NUMBER: PREV200300424624
TITLE: The role of Leishmania surface metaloprotease gp63 in sand fly vector.
AUTHOR(S): Hajmova, M. [Reprint Author]; Volf, P. [Reprint Author]; Kolli, B. K.; Chang, K.-P.
CORPORATE SOURCE: Charles University, Prague, Czech Republic
SOURCE: Journal of Eukaryotic Microbiology, (March-April 2003) Vol. 50, No. 2, pp. 17A-18A. print.
Meeting Info.: 32nd Annual Meeting of the Czech Section of the Society of Protozoologists. May, 2002. Society of Protozoologists.
ISSN: 1066-5234 (ISSN print).
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 17 Sep 2003
Last Updated on STN: 17 Sep 2003

L18 ANSWER 14 OF 87 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2003:64532 BIOSIS

DOCUMENT NUMBER: PREV200300064532
TITLE: The ADAMs family of metalloproteases: Multidomain proteins with multiple functions.
AUTHOR(S): Seals, Darren F.; Courtneidge, Sara A. [Reprint Author]
CORPORATE SOURCE: Van Andel Research Institute, Grand Rapids, MI, 49503, USA sara.courtneidge@vai.org
SOURCE: Genes & Development, (January 1 2003) Vol. 17, No. 1, pp. 7-30. print.
CODEN: GEDEEP. ISSN: 0890-9369.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 29 Jan 2003
Last Updated on STN: 29 Jan 2003

L18 ANSWER 15 OF 87 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2003-13613 BIOTECHDS
TITLE: Isolated human or murine Zace2 polypeptide useful for reducing inflammation in conditions such as inflammatory bowel disease, arthritis, enterocolitis, ulcerative colitis and Crohn's disease;
recombinant protein production and antibody for use in diease gene therapy
AUTHOR: PIDDINGTON C S; PETRIE C; SHOEMAKER K E; BISHOP P D
PATENT ASSIGNEE: ZYMOGENETICS INC
PATENT INFO: US 2002177211 28 Nov 2002
APPLICATION INFO: US 2001-978385 16 Oct 2001
PRIORITY INFO: US 2001-978385 16 Oct 2001; US 1999-133952 13 May 1999
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2003-328489 [31]

L18 ANSWER 16 OF 87 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2002-11328 BIOTECHDS
TITLE: Novel isolated metallopeptidase polypeptide, termed Zace1, for treating inflammatory bowel disease e.g. Crohn's disease, ulcerative colitis, and diseases associated with inflammation e.g. arthritis, enterocolitis;
vector-mediated metallo protease gene transfer, **expression** in host cell and antibody for **recombinant** protein production and drug screening
AUTHOR: SHEPPARD P O
PATENT ASSIGNEE: SHEPPARD P O
PATENT INFO: US 2002001583 3 Jan 2002
APPLICATION INFO: US 1998-846996 25 Nov 1998
PRIORITY INFO: US 2001-846996 1 May 2001
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-204857 [26]

L18 ANSWER 17 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:353597 HCAPLUS
DOCUMENT NUMBER: 136:365216
TITLE: **Recombinant** light chains of botulinum neurotoxins and light chain fusion proteins for use in research and clinical therapy
INVENTOR(S): Smith, Leonard A.; Jensen, Melody
PATENT ASSIGNEE(S): United States Army Medical Research and Material Command, USA
SOURCE: PCT Int. Appl., 166 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002036758	A2	20020510	WO 2001-US47230	20011106
WO 2002036758	A3	20040219		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003009025	A1	20030109	US 2001-910186	20010720
CA 2428270	AA	20020510	CA 2001-2428270	20011106
AU 2002028887	A5	20020515	AU 2002-28887	20011106
EP 1409529	A2	20040421	EP 2001-990010	20011106
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.:		
US 2000-246774P	P	20001106
US 2001-910186	A	20010720
US 2001-311966P	P	20010809
US 1999-133865P	P	19990512
US 1999-133866P	P	19990512
US 1999-133867P	P	19990512
US 1999-133868P	P	19990512
US 1999-133869P	P	19990512
US 1999-133873P	P	19990512
US 1999-146192P	P	19990729
WO 2000-US12890	W	20000512
US 2000-611419	A1	20000706
WO 2001-US47230	W	20011106

L18 ANSWER 18 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:51609 HCAPLUS
DOCUMENT NUMBER: 136:113829
TITLE: Human oligopeptidase A-like enzyme and cDNA and their use in drug screening and cancer diagnosis and treatment
INVENTOR(S): Ramakrishnan, Shyam
PATENT ASSIGNEE(S): Bayer Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002004608	A2	20020117	WO 2001-EP7583	20010703
WO 2002004608	A3	20020620		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: US 2000-216351P P 20000705

L18 ANSWER 19 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2002:686394 SCISEARCH
THE GENUINE ARTICLE: 582GX
TITLE: Contribution of molecular modeling and site-directed mutagenesis to the identification of two structural residues, Arg-220 and Asp-227, in aminopeptidase A
AUTHOR: Rozenfeld R; Iturrioz X; Maigret B; Llorens-Cortes C (Reprint)
CORPORATE SOURCE: Coll France, INSERM, Unite 36, 11 Pl Marcelin Berthelot, F-75005 Paris, France (Reprint); Coll France, INSERM, Unite 36, F-75005 Paris, France; Univ Nancy 1, CNRS, UMR 7565, Chim Theor Lab, F-54506 Vandoeuvre Les Nancy, France
COUNTRY OF AUTHOR: France
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (9 AUG 2002) Vol. 277, No. 32, pp. 29242-29252.
Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3996 USA.
ISSN: 0021-9258.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 42
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 20 OF 87 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 2002054087 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11675384
TITLE: Leukotriene A4 hydrolase/aminopeptidase. Glutamate 271 is a catalytic residue with specific roles in two distinct enzyme mechanisms.
AUTHOR: Rudberg Peter C; Tholander Fredrik; Thunnissen Marjolein M G M; Haeggstrom Jesper Z
CORPORATE SOURCE: Department of Medical Biochemistry and Biophysics, Division of Chemistry II, Karolinska Institutet, S-171 77 Stockholm, Sweden.
SOURCE: Journal of biological chemistry, (2002 Jan 11) 277 (2) 1398-404.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200202
ENTRY DATE: Entered STN: 20020125
Last Updated on STN: 20030105
Entered Medline: 20020207

L18 ANSWER 21 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2002:900903 SCISEARCH
THE GENUINE ARTICLE: 589BH
TITLE: Probing the active sites and mechanisms of rat metalloproteases meprin A and B
AUTHOR: Bertenshaw G P; Villa J P; Hengst J A; Bond J S (Reprint)
CORPORATE SOURCE: Penn State Univ, Coll Med, Dept Biochem & Mol Biol, Hershey, PA 17033 USA (Reprint)
COUNTRY OF AUTHOR: USA
SOURCE: BIOLOGICAL CHEMISTRY, (JUL-AUG 2002) Vol. 383, No. 7-8, pp. 1175-1183.
Publisher: WALTER DE GRUYTER & CO, GENTHINER STRASSE 13, D-10785 BERLIN, GERMANY.
ISSN: 1431-6730.

DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 43
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 22 OF 87 MEDLINE on STN DUPLICATE 7
ACCESSION NUMBER: 2002681098 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12441103
TITLE: Activation mechanism of pro-astacin: role of the pro-peptide, tryptic and autoproteolytic cleavage and importance of precise amino-terminal processing.
AUTHOR: Yiallouros Irene; Kappelhoff Reinhild; Schilling Oliver; Wegmann Frank; Helms Mike W; Auge Astrid; Brachtendorf Gertrud; Berkhoff Eva Grosse; Beermann Bernd; Hinz Hans Jurgen; Konig Simone; Peter-Katalinic Jasna; Stocker Walter
CORPORATE SOURCE: Institute of Zoophysiology, University of Munster, Hindenburgplatz 55, Munster, Germany.
SOURCE: Journal of molecular biology, (2002 Nov 22) 324 (2) 237-46. Journal code: 2985088R. ISSN: 0022-2836.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200212
ENTRY DATE: Entered STN: 20021121
Last Updated on STN: 20021227
Entered Medline: 20021223

L18 ANSWER 23 OF 87 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2002:584905 BIOSIS
DOCUMENT NUMBER: PREV200200584905
TITLE: Regulation of hemagglutinin/protease production in Vibrio cholerae.
AUTHOR(S): Silva, A. J. [Reprint author]; Benitez, J. A. [Reprint author]
CORPORATE SOURCE: California State University, Fresno, CA, USA
SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (2002) Vol. 102, pp. 73. print.
Meeting Info.: 102nd General Meeting of the American Society for Microbiology. Salt Lake City, UT, USA. May 19-23, 2002. American Society for Microbiology.
ISSN: 1060-2011.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 13 Nov 2002
Last Updated on STN: 30 Dec 2002

L18 ANSWER 24 OF 87 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2002-11684 BIOTECHDS
TITLE: New polypeptide-human ATP dependent membrane conjugated **zinc proteinase** 10.45 and polynucleotide for encoding such polypeptide;
vector-mediated gene transfer and **expression** in host cell for **recombinant** protein production and disease therapy
AUTHOR: MAO Y; XIE Y
PATENT ASSIGNEE: BODE GENE DEV CO LTD SHANGHAI
PATENT INFO: CN 1327066 19 Dec 2001
APPLICATION INFO: CN 2000-116334 5 Jun 2000
PRIORITY INFO: CN 2000-116334 5 Jun 2000
DOCUMENT TYPE: Patent
LANGUAGE: Chinese

OTHER SOURCE: WPI: 2002-206994 [27]

L18 ANSWER 25 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:115319 HCAPLUS
DOCUMENT NUMBER: 134:173907
TITLE: Proteins, nucleic acids, and antibodies for mammalian zinc metalloprotease subfamily members ADAMTS-5 through ADAMTS-10 and the related protein ADAMTS-R1
INVENTOR(S): Apte, Suneel S.; Hurskainen, Tiina L.; Hirohata, Satoshi
PATENT ASSIGNEE(S): Cleveland Clinic Foundation, USA
SOURCE: PCT Int. Appl., 181 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2001011074	A2	20010215	WO 2000-US21223		20000803
WO 2001011074	C2	20020912			
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
US 6391610	B1	20020521	US 1999-369364		19990806
AU 2000065160	A5	20010305	AU 2000-65160		20000803
US 2002110894	A1	20020815	US 2001-918171		20010730
PRIORITY APPLN. INFO.:			US 1999-369364	A	19990806
			WO 2000-US21223	W	20000803

L18 ANSWER 26 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2001:562978 SCISEARCH
THE GENUINE ARTICLE: 451VP
TITLE: Identification of amino acid residues in bone morphogenetic protein-1 important for procollagen C-proteinase activity
AUTHOR: Garrigue-Antar L; Barker C; Kadler K E (Reprint)
CORPORATE SOURCE: Univ Manchester, Sch Biol Sci, Wellcome Trust Ctr Cell Matrix Res, 2-205 Stopford Bldg, Oxford Rd, Manchester M13 9PT, Lancs, England (Reprint); Univ Manchester, Sch Biol Sci, Wellcome Trust Ctr Cell Matrix Res, Manchester M13 9PT, Lancs, England
COUNTRY OF AUTHOR: England
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (13 JUL 2001) Vol. 276, No. 28, pp. 26237-26242.
Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814 USA.
ISSN: 0021-9258.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 35
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 27 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:141131 HCAPLUS
DOCUMENT NUMBER: 134:292554

TITLE: A zinc finger-containing papain-like protease couples subgenomic mRNA synthesis to genome translation in a positive-stranded RNA virus
AUTHOR(S): Tijms, Marieke A.; Van Dinten, Leonie C.; Gorbalenya, Alexander E.; Snijder, Eric J.
CORPORATE SOURCE: Department of Virology, Center of Infectious Diseases, Leiden University Medical Center, Leiden, 2300 RC, Neth.
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2001), 98(4), 1889-1894
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 28 OF 87 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 2001343387 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11406201
TITLE: Up-regulation of TNF-alpha convertase (TACE/ADAM17) after oxygen-glucose deprivation in rat forebrain slices.
AUTHOR: Hurtado O; Cardenas A; Lizasoain I; Bosca L; Leza J C; Lorenzo P; Moro M A
CORPORATE SOURCE: Departamento de Farmacologia, Facultad de Medicina, Universidad Complutense de Madrid (UCM), 28040 Madrid, Spain.
SOURCE: Neuropharmacology, (2001 Jun) 40 (8) 1094-102.
Journal code: 0236217. ISSN: 0028-3908.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200109
ENTRY DATE: Entered STN: 20010910
Last Updated on STN: 20010910
Entered Medline: 20010906

L18 ANSWER 29 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2001:833486 SCISEARCH
THE GENUINE ARTICLE: 481TP
TITLE: Crystal structure of human macrophage elastase (MMP-12) in complex with a hydroxamic acid inhibitor
AUTHOR: Nar H (Reprint); Werle K; Bauer M M T; Dollinger H; Jung B
CORPORATE SOURCE: Boehringer Ingelheim Pharma KG, Dept Med Chem, Biberach, Germany (Reprint); SibTeq Stable Isotope Biotech GmbH, Munich, Germany; Boehringer Ingelheim Pharma KG, Dept Pulm Dis, Ingelheim, Germany
COUNTRY OF AUTHOR: Germany
SOURCE: JOURNAL OF MOLECULAR BIOLOGY, (28 SEP 2001) Vol. 312, No. 4, pp. 743-751.
Publisher: ACADEMIC PRESS LTD, 24-28 OVAL RD, LONDON NW1 7DX, ENGLAND.
ISSN: 0022-2836.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 34
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 30 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2001:719419 SCISEARCH
THE GENUINE ARTICLE: 470NK

TITLE: Mutational analysis of the proteolytic domain of pregnancy-associated plasma protein-A (PAPP-A): classification as a metzincin
AUTHOR: Boldt H B; Overgaard M T; Laursen L S; Weyer K; Sottrup-Jensen L; Oxvig C (Reprint)
CORPORATE SOURCE: Aarhus Univ, Dept Biol Mol & Struct, Sci Pk, Gustav Wieds Vej 10C, DK-8000 Aarhus C, Denmark (Reprint); Aarhus Univ, Dept Biol Mol & Struct, DK-8000 Aarhus C, Denmark
COUNTRY OF AUTHOR: Denmark
SOURCE: BIOCHEMICAL JOURNAL, (1 SEP 2001) Vol. 358, Part 2, pp. 359-367.
Publisher: PORTLAND PRESS, 59 PORTLAND PLACE, LONDON W1N 3AJ, ENGLAND.
ISSN: 0264-6021.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 44
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 31 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2001:928321 SCISEARCH
THE GENUINE ARTICLE: 492DD
TITLE: Progress in the design of matrix metalloproteinase inhibitors
AUTHOR: Cheng F (Reprint); Liu H; Luo X M; Jiang H L; Shen J K; Chen K X; Ji R Y
CORPORATE SOURCE: Chinese Acad Sci, Shanghai Inst Mat Med, Shanghai 200031, Peoples R China (Reprint)
COUNTRY OF AUTHOR: Peoples R China
SOURCE: PROGRESS IN CHEMISTRY, (JUL 2001) Vol. 13, No. 4, pp. 283-293.
Publisher: CHINESE ACAD SCIENCES, NO. 8 KEXUEYUANNANLU, ZHONGGUANCUN, BEIJING 100080, PEOPLES R CHINA.
ISSN: 1005-281X.
DOCUMENT TYPE: Article; Journal
LANGUAGE: Chinese
REFERENCE COUNT: 38
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 32 OF 87 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 2001234744 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11223883
TITLE: The neprilysin (NEP) family of zinc metalloendopeptidases: genomics and function.
AUTHOR: Turner A J; Isaac R E; Coates D
CORPORATE SOURCE: School of Biochemistry and Molecular Biology, University of Leeds, Leeds, UK.. a.j.turner@leeds.ac.uk
SOURCE: BioEssays : news and reviews in molecular, cellular and developmental biology, (2001 Mar) 23 (3) 261-9. Ref: 69
Journal code: 8510851. ISSN: 0265-9247.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200105
ENTRY DATE: Entered STN: 20010517
Last Updated on STN: 20010517
Entered Medline: 20010503

L18 ANSWER 33 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:199928 HCAPLUS

TITLE: Computational study on the reaction mechanism of histone deacetylases
AUTHOR(S): Wang, Di-Fei; Helquist, Paul; Wiech, Norbert L.; Wiest, Olaf G.; Oliver, A. Jayne
CORPORATE SOURCE: Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN, 46556, USA
SOURCE: Abstracts of Papers, 221st ACS National Meeting, San Diego, CA, United States, April 1-5, 2001 (2001) COMP-139
CODEN: 69FZD4
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; Meeting Abstract
LANGUAGE: English

L18 ANSWER 34 OF 87 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2001:355176 BIOSIS
DOCUMENT NUMBER: PREV200100355176
TITLE: Heterologous **expression** and functional analysis of the human **zinc peptidase** meprin.
AUTHOR(S): Kruse, M.-N. [Reprint author]; Koehler, D.; Slotty, K. A. [Reprint author]; Sterchi, E. E.; Stoecker, W. [Reprint author]
CORPORATE SOURCE: Institut fuer Zoophysiologie, Molekulare Physiologie, Universitaet Muenster, Muenster, Germany
SOURCE: Zoology (Jena), (2001) Vol. 103, No. Supplement 3, pp. 87. print.
Meeting Info.: 93rd Annual Meeting of the Deutsche Zoologische Gesellschaft. Bonn, Germany. June 12-16, 2000. Deutsche Zoologische Gesellschaft.
ISSN: 0944-2006.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 2 Aug 2001
Last Updated on STN: 19 Feb 2002

L18 ANSWER 35 OF 87 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2000:324025 BIOSIS
DOCUMENT NUMBER: PREV200000324025
TITLE: Characterization of the zinc binding activity of the rubella virus nonstructural protease.
AUTHOR(S): Liu, Xin; Yang, Jenny; Ghazi, A. Mohamad; Frey, Teryl K. [Reprint author]
CORPORATE SOURCE: Department of Biology, Georgia State University, Atlanta, GA, 30303, USA
SOURCE: Journal of Virology, (July, 2000) Vol. 74, No. 13, pp. 5949-5956. print.
CODEN: JOVIAM. ISSN: 0022-538X.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 2 Aug 2000
Last Updated on STN: 7 Jan 2002

L18 ANSWER 36 OF 87 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2000290148 EMBASE
TITLE: Cocrystal structure of synaptobrevin-II bound to botulinum neurotoxin type B at 2.0 Å resolution.
AUTHOR: Hanson M.A.; Stevens R.C.
CORPORATE SOURCE: R.C. Stevens, Dept. of Chem. and Molecular Biology, Scripps Research Institute, San Diego, CA 92037, United States. stevens@scripps.edu

SOURCE: Nature Structural Biology, (2000) 7/8 (687-692).
ISSN: 1072-8368 CODEN: NSBIEW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

L18 ANSWER 37 OF 87 LIFESCI COPYRIGHT 2004 CSA on STN
ACCESSION NUMBER: 2001:7981 LIFESCI
TITLE: Differential **expression** of GP63 genes in Trypanosoma cruzi
AUTHOR: Grandgenett, P.M.; Coughlin, B.C.; Kirchhoff, L.V.; Donelson, J.E.*
CORPORATE SOURCE: Genetics Ph.D. Program, University of Iowa, Iowa City, IA 52242, USA; E-mail: john-donelson@uiowa.edu
SOURCE: Molecular and Biochemical Parasitology [Mol. Biochem. Parasitol.], (20001000) vol. 110, no. 2, pp. 409-415.
ISSN: 0166-6851.
DOCUMENT TYPE: Journal
FILE SEGMENT: G; K
LANGUAGE: English

L18 ANSWER 38 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:490736 HCAPLUS
DOCUMENT NUMBER: 134:217801
TITLE: Mutations in the Arabidopsis VAR2 locus cause leaf variegation due to the loss of a chloroplast FtsH protease
AUTHOR(S): Chen, Meng; Choi, YangDo; Voytas, Daniel F.; Rodermel, Steve
CORPORATE SOURCE: Department of Botany, Iowa State University, Ames, IA, 50011, USA
SOURCE: Plant Journal (2000), 22(4), 303-313
CODEN: PLJUED; ISSN: 0960-7412
PUBLISHER: Blackwell Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 39 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2001:32578 SCISEARCH
THE GENUINE ARTICLE: 388AA
TITLE: Chimeric derivative of fibrolase, a fibrinolytic enzyme from southern copperhead venom, possesses inhibitory activity on platelet aggregation
AUTHOR: Swenson S; Bush L R; Markland F S (Reprint)
CORPORATE SOURCE: Univ So Calif, Keck Sch Med, Dept Biochem & Mol Biol, Los Angeles, CA 90033 USA (Reprint); Univ So Calif, Keck Sch Med, Kenneth Norris Jr Comprehens Canc Ctr, Los Angeles, CA 90033 USA; Diatide Inc, Londondery, NH 03053 USA
COUNTRY OF AUTHOR: USA
SOURCE: ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS, (15 DEC 2000) Vol. 384, No. 2, pp. 227-237.
Publisher: ACADEMIC PRESS INC, 525 B ST, STE 1900, SAN DIEGO, CA 92101-4495 USA.
ISSN: 0003-9861.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 52
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 40 OF 87 MEDLINE on STN DUPLICATE 10
ACCESSION NUMBER: 2001061083 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11078883
TITLE: The roles of Glu93 and Tyr149 in astacin-like **zinc peptidases**.
AUTHOR: Yiallouros I; Grosse Berkhoff E; Stocker W
CORPORATE SOURCE: Institute of Zoophysiology, University of Munster, Hindenburgplatz 55, D-48143, Munster, Germany.. yiallou@uni-muenster.de
SOURCE: FEBS letters, (2000 Nov 10) 484 (3) 224-8.
Journal code: 0155157. ISSN: 0014-5793.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200012
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001222

L18 ANSWER 41 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2000:235391 SCISEARCH
THE GENUINE ARTICLE: 295ZL
TITLE: Structure and function of the methionine aminopeptidases
AUTHOR: Lowther W T; Matthews B W (Reprint)
CORPORATE SOURCE: UNIV OREGON, HOWARD HUGHES MED INST, INST MOL BIOL, EUGENE, OR 97403 (Reprint); UNIV OREGON, HOWARD HUGHES MED INST, INST MOL BIOL, EUGENE, OR 97403; UNIV OREGON, DEPT PHYS, EUGENE, OR 97403
COUNTRY OF AUTHOR: USA
SOURCE: BIOCHIMICA ET BIOPHYSICA ACTA-PROTEIN STRUCTURE AND MOLECULAR ENZYMOLOGY, (7 MAR 2000) Vol. 1477, No. 1-2, pp. 157-167.
Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
ISSN: 0167-4838.
DOCUMENT TYPE: General Review; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 66
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 42 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:466933 HCAPLUS
DOCUMENT NUMBER: 131:239681
TITLE: A human RNA viral cysteine proteinase that depends upon a unique Zn2+-binding finger connecting the two domains of a papain-like fold
AUTHOR(S): Herold, Jens; Siddell, Stuart G.; Gorbalenya, Alexander E.
CORPORATE SOURCE: Institute of Virology and Immunology, University of Wurzburg, Wurzburg, 97078, Germany
SOURCE: Journal of Biological Chemistry (1999), 274(21), 14918-14925
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 86 THERE ARE 86 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 43 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation.

on STN
ACCESSION NUMBER: 1999:497860 SCISEARCH
THE GENUINE ARTICLE: 208XB
TITLE: Escherichia coli methionine aminopeptidase: Implications of crystallographic analyses of the native, mutant, and inhibited enzymes for the mechanism of catalysis
AUTHOR: Lowther W T; Orville A M; Madden D T; Lim S J; Rich D H; Matthews B W (Reprint)
CORPORATE SOURCE: UNIV OREGON, HOWARD HUGHES MED INST, INST MOL BIOL, 1229 UNIV OREGON, EUGENE, OR 97403 (Reprint); UNIV OREGON, HOWARD HUGHES MED INST, INST MOL BIOL, EUGENE, OR 97403; UNIV OREGON, DEPT PHYS, EUGENE, OR 97403; UNIV WISCONSIN, DEPT CHEM, MADISON, WI 53706; UNIV WISCONSIN, SCH PHARM, MADISON, WI 53706
COUNTRY OF AUTHOR: USA
SOURCE: BIOCHEMISTRY, (15 JUN 1999) Vol. 38, No. 24, pp. 7678-7688
.
Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036.
ISSN: 0006-2960.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 61
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 44 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 1999:427499 SCISEARCH
THE GENUINE ARTICLE: 201KL
TITLE: Enhancement of the endopeptidase activity of botulinum neurotoxin by its associated proteins and dithiothreitol
AUTHOR: Cai S O; Sarkar H K; Singh B R (Reprint)
CORPORATE SOURCE: UNIV MASSACHUSETTS, DEPT CHEM & BIOCHEM, 285 OLD WESTPORT RD, N DARTMOUTH, MA 02747 (Reprint); UNIV MASSACHUSETTS, DEPT CHEM & BIOCHEM, N DARTMOUTH, MA 02747; UNIV MASSACHUSETTS, CTR MARINE SCI & TECHNOL, N DARTMOUTH, MA 02747; BAYLOR COLL MED, DEPT MOL PHYSIOL & BIOPHYS, HOUSTON, TX 77030
COUNTRY OF AUTHOR: USA
SOURCE: BIOCHEMISTRY, (25 MAY 1999) Vol. 38, No. 21, pp. 6903-6910
.
Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036.
ISSN: 0006-2960.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 42
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 45 OF 87 MEDLINE on STN DUPLICATE 11
ACCESSION NUMBER: 2000053900 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10585873
TITLE: cDNA **cloning**, bacterial **expression**, in vitro renaturation and affinity purification of the zinc endopeptidase astacin.
AUTHOR: Reyda S; Jacob E; Zwilling R; Stocker W
CORPORATE SOURCE: Zoologisches Institut, Universitat Heidelberg, Im Neuenheimer Feld 230, D-69120 Heidelberg, Germany.
SOURCE: Biochemical journal, (1999 Dec 15) 344 Pt 3 851-7.
Journal code: 2984726R. ISSN: 0264-6021.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AJ242595
ENTRY MONTH: 200003
ENTRY DATE: Entered STN: 20000330
Last Updated on STN: 20000330
Entered Medline: 20000317

L18 ANSWER 46 OF 87 MEDLINE on STN DUPLICATE 12
ACCESSION NUMBER: 1999235565 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10220159
TITLE: Characterization of a chromosomally encoded glycylglycine endopeptidase of Staphylococcus aureus.
AUTHOR: Ramadurai L; Lockwood K J; Nadakavukaren M J; Jayaswal R K
CORPORATE SOURCE: Department of Biological Sciences, Illinois State University, Normal 61790-4120, USA.
SOURCE: Microbiology (Reading, England), (1999 Apr) 145 (Pt 4) 801-8.
Journal code: 9430468. ISSN: 1350-0872.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199909
ENTRY DATE: Entered STN: 19990921
Last Updated on STN: 20000303
Entered Medline: 19990908

L18 ANSWER 47 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:428884 HCAPLUS
DOCUMENT NUMBER: 131:210810
TITLE: Enzymatic action of human glandular kallikrein 2 (hK2). Substrate specificity and regulation by Zn2+ and extracellular protease inhibitors
AUTHOR(S): Lovgren, Janita; Airas, Kalervo; Lilja, Hans
CORPORATE SOURCE: Department of Laboratory Medicine, Division of Clinical Chemistry, Lund University, Malmo, Swed.
SOURCE: European Journal of Biochemistry (1999), 262(3), 781-789
CODEN: EJBCAI; ISSN: 0014-2956
PUBLISHER: Blackwell Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 48 OF 87 MEDLINE on STN DUPLICATE 13
ACCESSION NUMBER: 2000026098 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10556534
TITLE: Second transmembrane segment of FtsH plays a role in its proteolytic activity and homo-oligomerization.
COMMENT: Erratum in: FEBS Lett 2000 Feb 11;467(2-3):365. Makinoa T[corrected to Makino T]
AUTHOR: Makino S; Makino T; Abe K; Hashimoto J; Tatsuta T; Kitagawa M; Mori H; Ogura T; Fujii T; Fushinobu S; Wakagi T; Matsuzawa H; Makinoa T
CORPORATE SOURCE: Department of Biotechnology, The University of Tokyo, 1-1-1 Yayoi, Bunkyo-ku, Tokyo,. Japan.smakino@nibh.go.jp
SOURCE: FEBS letters, (1999 Nov 5) 460 (3) 554-8.
Journal code: 0155157. ISSN: 0014-5793.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals

ENTRY MONTH: 199912
ENTRY DATE: Entered STN: 20000113
Last Updated on STN: 20021218
Entered Medline: 19991222

L18 ANSWER 49 OF 87 MEDLINE on STN DUPLICATE 14
ACCESSION NUMBER: 1998395014 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9726890
TITLE: Genetic characterization and physiological role of endopeptidase O from Lactobacillus helveticus CNRZ32.
AUTHOR: Chen Y S; Steele J L
CORPORATE SOURCE: Department of Food Science, University of Wisconsin-Madison, Madison, Wisconsin 53706, USA.
SOURCE: Applied and environmental microbiology, (1998 Sep) 64 (9) 3411-5.
Journal code: 7605801. ISSN: 0099-2240.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF019410
ENTRY MONTH: 199810
ENTRY DATE: Entered STN: 19990106
Last Updated on STN: 20000303
Entered Medline: 19981030

L18 ANSWER 50 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 1998:796437 SCISEARCH
THE GENUINE ARTICLE: 127YJ
TITLE: Structural characterizations of nonpeptidic thiadiazole inhibitors of matrix metalloproteinases reveal the basis for stromelysin selectivity
AUTHOR: Finzel B C (Reprint); Baldwin E T; Bryant G L; Hess G F; Wilks J W; Trepod C M; Mott J E; Marshall V P; Petzold G L; Poorman R A; OSullivan T J; Schostarez H J; Mitchell M A
CORPORATE SOURCE: PHARMACIA & UPJOHN INC, STRUCT ANALYT & MED CHEM, KALAMAZOO, MI 49007 (Reprint); PHARMACIA & UPJOHN INC, CELL & MOL BIOL, KALAMAZOO, MI 49007; PHARMACIA & UPJOHN INC, BIOPROC RES PREPARAT, KALAMAZOO, MI 49007; PHARMACIA & UPJOHN INC, PROT SCI, KALAMAZOO, MI 49007; PHARMACIA & UPJOHN INC, MED CHEM, KALAMAZOO, MI 49007
COUNTRY OF AUTHOR: USA
SOURCE: PROTEIN SCIENCE, (OCT 1998) Vol. 7, No. 10, pp. 2118-2126.
Publisher: CAMBRIDGE UNIV PRESS, 40 WEST 20TH STREET, NEW YORK, NY 10011-4211.
ISSN: 0961-8368.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 42
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 51 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 1998:695245 SCISEARCH
THE GENUINE ARTICLE: 116RN
TITLE: Matrix metalloproteinases: structures, evolution, and diversification
AUTHOR: Massova I; Kotra L P; Fridman R; Mobashery S (Reprint)
CORPORATE SOURCE: WAYNE STATE UNIV, DEPT CHEM, DETROIT, MI 48202 (Reprint); WAYNE STATE UNIV, DEPT CHEM, DETROIT, MI 48202; WAYNE STATE UNIV, DEPT PATHOL, DETROIT, MI 48202; WAYNE STATE

UNIV, KARMANOS CANC INST, DETROIT, MI 48202
COUNTRY OF AUTHOR: USA
SOURCE: FASEB JOURNAL, (SEP 1998) Vol. 12, No. 12, pp. 1075-1095. Publisher: FEDERATION AMER SOC EXP BIOL, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3998. ISSN: 0892-6638.
DOCUMENT TYPE: General Review; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 58
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 52 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 1998:643483 SCISEARCH
THE GENUINE ARTICLE: 111QQ
TITLE: Bacteriolytic activity and specificity of Achromobacter beta-lytic protease
AUTHOR: Li S L (Reprint); Norioka S; Sakiyama F
CORPORATE SOURCE: OSAKA UNIV, INST PROT RES, DIV PROT CHEM, 2-2 YAMADAOKA, SUITA, OSAKA 5650871, JAPAN (Reprint)
COUNTRY OF AUTHOR: JAPAN
SOURCE: JOURNAL OF BIOCHEMISTRY, (AUG 1998) Vol. 124, No. 2, pp. 332-339. Publisher: JAPANESE BIOCHEMICAL SOC, ISHIKAWA BLDG-3F, 25-16 HONGO-5-CHOME, BUNKYO-KU, TOKYO 113, JAPAN. ISSN: 0021-924X.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 22
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 53 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:70610 HCAPLUS
DOCUMENT NUMBER: 128:241178
TITLE: Dipeptidyl peptidase III is a zinc metallo-exopeptidase, Molecular **cloning** and **expression**
AUTHOR(S): Fukasawa, Katsuhiko; Fukasawa, Kayoko M.; Kanai, Makoto; Fujii, Shingo; Hirose, Junzo; Harada, Minoru
CORPORATE SOURCE: Department of Oral Biochemistry, Matsumoto Dental College, Nagano, 399-07, Japan
SOURCE: Biochemical Journal (1998), 329(2), 275-282 CODEN: BIJOAK; ISSN: 0264-6021
PUBLISHER: Portland Press Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 54 OF 87 MEDLINE on STN
ACCESSION NUMBER: 1998062321 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9398337
TITLE: Site-directed mutagenesis of the active site glutamate in human matrilysin: investigation of its role in catalysis.
AUTHOR: Cha J; Auld D S
CORPORATE SOURCE: Center for Biochemical and Biophysical Sciences and Medicine, Harvard Medical School, Boston, Massachusetts 02115, USA.
CONTRACT NUMBER: GM-53265 (NIGMS)
SOURCE: Biochemistry, (1997 Dec 16) 36 (50) 16019-24. Journal code: 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199801
ENTRY DATE: Entered STN: 19980206
Last Updated on STN: 20000303
Entered Medline: 19980127

L18 ANSWER 55 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 97:591363 SCISEARCH
THE GENUINE ARTICLE: XP073
TITLE: Effects of pH, temperature, and alcohols on the remarkable activation of thermolysin by salts
AUTHOR: Inouye K (Reprint); Lee S B; Nambu K; Tonomura B
CORPORATE SOURCE: KYOTO UNIV, FAC AGR, DEPT FOOD SCI & TECHNOL, SAKYO KU, KYOTO 60601, JAPAN (Reprint)
COUNTRY OF AUTHOR: JAPAN
SOURCE: JOURNAL OF BIOCHEMISTRY, (AUG 1997) Vol. 122, No. 2, pp. 358-364.
Publisher: JAPANESE BIOCHEMICAL SOC, ISHIKAWA BLDG-3F, 25-16 HONGO-5-CHOME, BUNKYO-KU, TOKYO 113, JAPAN.
ISSN: 0021-924X.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 46
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 56 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 97:524256 SCISEARCH
THE GENUINE ARTICLE: XJ247
TITLE: 1.8-angstrom crystal structure of the catalytic domain of human neutrophil collagenase (matrix metalloproteinase-8) complexed with a peptidomimetic hydroxamate prime-side inhibitor with a distinct selectivity profile
AUTHOR: Betz M; Huxley P; Davies S J; Mushtaq Y; Pieper M; Tschesche H; Bode W; GomisRuth F X (Reprint)
CORPORATE SOURCE: CSIC, CTR INVEST, JORDI GIRONA 18-26, E-08034 BARCELONA, SPAIN (Reprint); MAX PLANCK INST BIOCHEM, PLANEGG, GERMANY; BRITISH BIOTECH PHARMACEUT LTD, OXFORD, ENGLAND; UNIV BIELEFELD, D-4800 BIELEFELD, GERMANY
COUNTRY OF AUTHOR: SPAIN; GERMANY; ENGLAND
SOURCE: EUROPEAN JOURNAL OF BIOCHEMISTRY, (1 JUL 1997) Vol. 247, No. 1, pp. 356-363.
Publisher: SPRINGER VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010.
ISSN: 0014-2956.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 41
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 57 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 97:585019 SCISEARCH
THE GENUINE ARTICLE: XN651
TITLE: The role of angiotensin-converting enzyme in blood pressure control, renal function, and male fertility
AUTHOR: Esther C R; Marino E M (Reprint); Bernstein K E
CORPORATE SOURCE: EMORY UNIV, DEPT PATHOL, ATLANTA, GA 30322 (Reprint); EMORY UNIV, DEPT PATHOL, ATLANTA, GA 30322

COUNTRY OF AUTHOR: USA
SOURCE: TRENDS IN ENDOCRINOLOGY AND METABOLISM, (JUL 1997) Vol. 8, No. 5, pp. 181-186.
Publisher: ELSEVIER SCIENCE INC, 655 AVENUE OF THE AMERICAS, NEW YORK, NY 10010.
ISSN: 1043-2760.
DOCUMENT TYPE: General Review; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 56
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 58 OF 87 MEDLINE on STN DUPLICATE 15
ACCESSION NUMBER: 97479197 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9337849
TITLE: Identification by site-directed mutagenesis of three essential histidine residues in membrane dipeptidase, a novel mammalian **zinc peptidase**.
AUTHOR: Keynan S; Hooper N M; Turner A J
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, University of Leeds, U.K.
SOURCE: Biochemical journal, (1997 Aug 15) 326 (Pt 1) 47-51.
Journal code: 2984726R. ISSN: 0264-6021.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199711
ENTRY DATE: Entered STN: 19971224
Last Updated on STN: 20000303
Entered Medline: 19971113

L18 ANSWER 59 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 97:94099 SCISEARCH
THE GENUINE ARTICLE: WD500
TITLE: Tissue distribution and subcellular localization of rabbit liver metalloendopeptidase
AUTHOR: Nakagawa K (Reprint); Kawabata S; Nakashima Y; Iwanaga S; Sueishi K
CORPORATE SOURCE: KYUSHU UNIV, FAC MED, DEPT PATHOL, HIGASHI KU, 60 3-1-1 MAIDASHI, FUKUOKA 81282, JAPAN (Reprint); KYUSHU UNIV, FAC SCI, DEPT BIOL, FUKUOKA 812, JAPAN
COUNTRY OF AUTHOR: JAPAN
SOURCE: JOURNAL OF HISTOCHEMISTRY & CYTOCHEMISTRY, (JAN 1997) Vol. 45, No. 1, pp. 41-47.
Publisher: HISTOCHEMICAL SOC INC, MT SINAI MEDICAL CENTER 19 EAST 98TH ST SUTIE 9G, NEW YORK, NY 10029.
ISSN: 0022-1554.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 30
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 60 OF 87 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 1997:281751 BIOSIS
DOCUMENT NUMBER: PREV199799580954
TITLE: Regulation of the surface Zn-proteinase **expression** in Leishmania by Zn-2+ to modulate parasite virulence.
AUTHOR(S): Porter, J. M. [Reprint author]; Seay, M. B.; Parl, A. K.; Chaudhuri, G.
CORPORATE SOURCE: Dep. Microbiol., Meharry Med. Coll., Nashville, TN 37208,

USA
SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (1997) Vol. 97, No. 0, pp. 31.
Meeting Info.: 97th General Meeting of the American Society for Microbiology. Miami Beach, Florida, USA. May 4-8, 1997.
ISSN: 1060-2011.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Jul 1997
Last Updated on STN: 3 Jul 1997

L18 ANSWER 61 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:4043 HCAPLUS
DOCUMENT NUMBER: 128:137812
TITLE: Structural studies of aminopeptidase P. A novel cellular peptidase
AUTHOR(S): Turner, Anthony J.; Hyde, Ralph J.; Lim, Jaeseung; Hooper, Nigel M.
CORPORATE SOURCE: Dep. of Biochemistry and Molecular Biology, University of Leeds, Leeds, LS2 9JT, UK
SOURCE: Advances in Experimental Medicine and Biology (1997), 421(Cellular Peptidases in Immune Functions and Diseases), 7-16
CODEN: AEMBAP; ISSN: 0065-2598
PUBLISHER: Plenum Publishing Corp.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 62 OF 87 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN DUPLICATE 16
ACCESSION NUMBER: 1997:24167 BIOSIS
DOCUMENT NUMBER: PREV199799323370
TITLE: Surface Zn-proteinase as a molecule for defense of Leishmania mexicana amazonensis promastigotes against cytolysis inside macrophage phagolysosomes.
AUTHOR(S): Seay, Michael B.; Heard, Pamela L.; Chaudhuri, Gautam [Reprint author]
CORPORATE SOURCE: Div. Biomedical Sci., Meharry Med. Coll., 1005 D. B. Todd, Jr. Blvd., Nashville, TN 37208, USA
SOURCE: Infection and Immunity, (1996) Vol. 64, No. 12, pp. 5129-5137.
CODEN: INFIBR. ISSN: 0019-9567.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 15 Jan 1997
Last Updated on STN: 15 Jan 1997

L18 ANSWER 63 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 97:79547 SCISEARCH
THE GENUINE ARTICLE: WC758
TITLE: Sequence and functional analysis of an Escherichia coli DNA fragment able to complement pqqE and pqqF mutants from Methylobacterium organophilum
AUTHOR: Turlin E; Gasser F; Biville F (Reprint)
CORPORATE SOURCE: INST PASTEUR, UNITE REGULAT EXPRESS GENET, DEPT BIOCHIM & GENET MOL, 28 RUE DR ROUX, F-75724 PARIS 15, FRANCE (Reprint); INST PASTEUR, UNITE REGULAT EXPRESS GENET, DEPT BIOCHIM & GENET MOL, F-75724 PARIS 15, FRANCE
COUNTRY OF AUTHOR: FRANCE

SOURCE: BIOCHIMIE, (JAN 1996) Vol. 78, No. 10, pp. 822-831.
Publisher: EDITIONS SCIENTIFIQUES ELSEVIER, 141 RUE JAVEL, 75747 PARIS CEDEX 15, FRANCE.
ISSN: 0300-9084.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 45
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 64 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:31022 HCAPLUS
DOCUMENT NUMBER: 126:55411
TITLE: Molecular **cloning** and disease associations of hepatitis G virus
AUTHOR(S): Kim, Jungsuh P.; Fry, Kirk E.; Wages, John, Jr.
CORPORATE SOURCE: Genelabs Technologies, Inc., Redwood City, CA, 94063, USA
SOURCE: Antiviral Therapy (1996), 1(Suppl. 3, Therapies for Viral Hepatitis), 33-38
CODEN: ANTHFA
PUBLISHER: MTM Publications
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

L18 ANSWER 65 OF 87 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 1995:515584 BIOSIS
DOCUMENT NUMBER: PREV199598529884
TITLE: A tolloid-like gene is regulated in Aplysia neurons by treatments that induce long-term memory.
AUTHOR(S): Liu, Q. R. [Reprint author]; Hattar, S. [Reprint author]; Macphee, K. [Reprint author]; Byrne, J. H.; Eskin, A. [Reprint author]
CORPORATE SOURCE: Dep. Biochem. Biophys. Sci., Univ. Houston, Houston, TX 77204, USA
SOURCE: Society for Neuroscience Abstracts, (1995) Vol. 21, No. 1-3, pp. 1680.
Meeting Info.: 25th Annual Meeting of the Society for Neuroscience. San Diego, California, USA. November 11-16, 1995.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Dec 1995
Last Updated on STN: 5 Dec 1995

L18 ANSWER 66 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 95:471164 SCISEARCH
THE GENUINE ARTICLE: RG310
TITLE: THE RENAL MEMBRANE DIPEPTIDASE (DEHYDROPEPTIDASE-I) INHIBITOR, CILASTATIN, INHIBITS THE BACTERIAL METALLO-BETA-LACTAMASE ENZYME CPHA
AUTHOR: KEYNAN S (Reprint); HOOPER N M; FELICI A; AMICOSANTE G; TURNER A J
CORPORATE SOURCE: UNIV LEEDS, DEPT BIOCHEM & MOLEC BIOL, LEEDS LS2 9JT, W YORKSHIRE, ENGLAND (Reprint); UNIV LAQUILA, FAC MED, I-67100 LAQUILA, ITALY
COUNTRY OF AUTHOR: ENGLAND; ITALY
SOURCE: ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (JUL 1995) Vol. 39, No. 7, pp. 1629-1631.

ISSN: 0066-4804.
DOCUMENT TYPE: Note; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 21
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 67 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 95:701339 SCISEARCH
THE GENUINE ARTICLE: RY357
TITLE: SUBSTRATE-SPECIFICITY OF RABBIT LIVER METALLOENDOPEPTIDASE AND ITS NEW FLUOROGENIC PEPTIDE-SUBSTRATES
AUTHOR: KOJIMA N; KAWABATA S (Reprint); MAKINOSE Y; NISHINO N; IWANAGA S
CORPORATE SOURCE: KYUSHU UNIV 33, FAC SCI, DEPT BIOL, HIGASHI KU, FUKUOKA 81281, JAPAN (Reprint); KYUSHU UNIV 33, FAC SCI, DEPT BIOL, HIGASHI KU, FUKUOKA 81281, JAPAN; KYUSHU INST TECHNOL, FAC ENGN, DEPT APPL CHEM, KITAKYUSHU 804, FUKUOKA, JAPAN
COUNTRY OF AUTHOR: JAPAN
SOURCE: JOURNAL OF BIOCHEMISTRY, (OCT 1995) Vol. 118, No. 4, pp. 855-861.
ISSN: 0021-924X.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 39
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 68 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 95:330834 SCISEARCH
THE GENUINE ARTICLE: QW981
TITLE: THE METZINCINS - TOPOLOGICAL AND SEQUENTIAL RELATIONS BETWEEN THE ASTACINS, ADAMALYSINS, SERRALYSINS, AND MATRIXINS (COLLAGENASES) DEFINE A SUPERFAMILY OF **ZINC-PEPTIDASES**
AUTHOR: STOCKER W (Reprint); GRAMS F; BAUMANN U; REINEMER P; GOMISRUTH F X; MCKAY D B; BODE W
CORPORATE SOURCE: UNIV HEIDELBERG, INST ZOOL, NEUENHEIMER FELD 230, D-69120 HEIDELBERG, GERMANY (Reprint); MAX PLANCK INST BIOCHEM, D-82152 MARTINSRIED, GERMANY; UNIV FREIBURG, INST ORGAN CHEM & BIOCHEM, D-79104 FREIBURG, GERMANY; UNIV AUTONOMA BARCELONA, INST BIOL FONAMENTAL, E-08193 BARCELONA, SPAIN; STANFORD UNIV, SCH MED, DEPT CELL BIOL, BECKMAN LABS STRUCT BIOL, STANFORD, CA, 94305
COUNTRY OF AUTHOR: GERMANY; SPAIN; USA
SOURCE: PROTEIN SCIENCE, (MAY 1995) Vol. 4, No. 5, pp. 823-840.
ISSN: 0961-8368.
DOCUMENT TYPE: General Review; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 136
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 69 OF 87 MEDLINE on STN DUPLICATE 17
ACCESSION NUMBER: 94304829 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8031754
TITLE: Crystal structures of **recombinant** 19-kDa human fibroblast collagenase complexed to itself.
AUTHOR: Lovejoy B; Hassell A M; Luther M A; Weigl D; Jordan S R
CORPORATE SOURCE: Glaxo Research Institute, Research Triangle Park, North Carolina 27709.

SOURCE: Biochemistry, (1994 Jul 12) 33 (27) 8207-17.
Journal code: 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199408
ENTRY DATE: Entered STN: 19940825
Last Updated on STN: 20000303
Entered Medline: 19940816

L18 ANSWER 70 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 94:380207 SCISEARCH
THE GENUINE ARTICLE: NR647
TITLE: NEW THIOL INHIBITORS OF NEUTRAL ENDOPEPTIDASE EC-3.4.24.11 - SYNTHESIS AND ENZYME ACTIVE-SITE RECOGNITION
AUTHOR: GOMEZMONTERREY I; BEAUMONT A; NEMECEK P; ROQUES B P (Reprint); FOURNIEZALUSKI M C
CORPORATE SOURCE: UNIV PARIS 05, UFR SCI PHARMACEUT & BIOL, CNRS, URA D1500, INSERM, U266, UNITE PHARMACOCHIM MOLEC, F-75270 PARIS 06, FRANCE (Reprint); UNIV PARIS 05, UFR SCI PHARMACEUT & BIOL, CNRS, URA D1500, INSERM, U266, UNITE PHARMACOCHIM MOLEC, F-75270 PARIS 06, FRANCE; RHONE POULENC RORER, CTR RECH VITRY ALFORTVILLE, F-94403 VITRY, FRANCE
COUNTRY OF AUTHOR: FRANCE
SOURCE: JOURNAL OF MEDICINAL CHEMISTRY, (10 JUN 1994) Vol. 37, No. 12, pp. 1865-1873.
ISSN: 0022-2623.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 50
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 71 OF 87 MEDLINE on STN DUPLICATE 18
ACCESSION NUMBER: 94222095 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8168535
TITLE: Asp650 is crucial for catalytic activity of neutral endopeptidase 24-11.
AUTHOR: Le Moual H; Dion N; Roques B P; Crine P; Boileau G
CORPORATE SOURCE: Departement de Biochimie, Universite de Montreal, Canada.
SOURCE: European journal of biochemistry / FEBS, (1994 Apr 1) 221 (1) 475-80.
Journal code: 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199406
ENTRY DATE: Entered STN: 19940613
Last Updated on STN: 20000303
Entered Medline: 19940602

L18 ANSWER 72 OF 87 MEDLINE on STN DUPLICATE 19
ACCESSION NUMBER: 94368822 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8086433
TITLE: Elucidation of the thermal stability of the neutral proteinase II from Aspergillus oryzae.
AUTHOR: Tatsumi H; Ikegaya K; Murakami S; Kawabe H; Nakano E; Motai H
CORPORATE SOURCE: Research and Development Division, Kikkoman Corporation, Chiba, Japan.
SOURCE: Biochimica et biophysica acta, (1994 Sep 21) 1208 (1)

179-85.
Journal code: 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199410
ENTRY DATE: Entered STN: 19941031
Last Updated on STN: 20000303
Entered Medline: 19941018

L18 ANSWER 73 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 94:622724 SCISEARCH
THE GENUINE ARTICLE: PH592
TITLE: ELUCIDATION OF THE THERMAL-STABILITY OF THE NEUTRAL PROTEINASE-II FROM ASPERGILLUS-ORYZAE
AUTHOR: TATSUMI H (Reprint); IKEGAYA K; MURAKAMI S; KAWABE H; NAKANO E; MOTAI H
CORPORATE SOURCE: KIKKOMAN FOODS INC, DIV RES & DEV, 399 NODA, NODA, CHIBA 278, JAPAN (Reprint); GREEN CROSS CO, DIV RES, HIRAKATA, OSAKA 573, JAPAN
COUNTRY OF AUTHOR: JAPAN
SOURCE: BIOCHIMICA ET BIOPHYSICA ACTA-PROTEIN STRUCTURE AND MOLECULAR ENZYMOLOGY, (21 SEP 1994) Vol. 1208, No. 1, pp. 179-185.
ISSN: 0167-4838.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 39
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 74 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:500613 HCAPLUS
DOCUMENT NUMBER: 121:100613
TITLE: Degradation of insulin-like growth factor (IGF)-binding protein-3 (IGFBP-3) by a metal-dependent protease produced by human fibroblasts: effects of IGFs on protease activity
AUTHOR(S): Fowlkes, J.L.
CORPORATE SOURCE: Med. Cent., Duke Univ., Durham, NC, 27710, USA
SOURCE: Endocrine Journal (Basingstoke, United Kingdom) (1994), 2(1), 63-8
CODEN: EDJUE6; ISSN: 0969-711X
DOCUMENT TYPE: Journal
LANGUAGE: English

L18 ANSWER 75 OF 87 MEDLINE on STN DUPLICATE 20
ACCESSION NUMBER: 94059987 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8241164
TITLE: Secondary structure and zinc ligation of human **recombinant** short-form stromelysin by multidimensional heteronuclear NMR.
AUTHOR: Gooley P R; Johnson B A; Marcy A I; Cuca G C; Salowe S P; Hagmann W K; Esser C K; Springer J P
CORPORATE SOURCE: Department of Biophysical Chemistry, Merck Research Laboratories, Rahway, New Jersey 07065.
SOURCE: Biochemistry, (1993 Dec 7) 32 (48) 13098-108.
Journal code: 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals

ENTRY MONTH: 199401
ENTRY DATE: Entered STN: 19940201
Last Updated on STN: 20000303
Entered Medline: 19940106

L18 ANSWER 76 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:423669 HCAPLUS
DOCUMENT NUMBER: 119:23669
TITLE: The zinc metalloprotease of Listeria monocytogenes is required for maturation of phosphatidylcholine phospholipase C: Direct evidence obtained by gene complementation
AUTHOR(S): Poyart, Claire; Abachin, Eric; Razafimanantsoa, Ihari; Berche, Patrick
CORPORATE SOURCE: Lab. Microbiol., Fac. Med., Necker-Enfants Malades, 75724, Fr.
SOURCE: Infection and Immunity (1993), 61(4), 1576-80
CODEN: INFIBR; ISSN: 0019-9567
DOCUMENT TYPE: Journal
LANGUAGE: English

L18 ANSWER 77 OF 87 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 1993:358112 BIOSIS
DOCUMENT NUMBER: PREV199345041537
TITLE: Increased **expression** of the surface **zinc -proteinase** in zinc-tolerant Leishmania mexicana amazonensis.
AUTHOR(S): Chaudhuri, Gautam
CORPORATE SOURCE: Meharry Med. College, Nashville, TN 37208, USA
SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (1993) Vol. 93, No. 0, pp. 234.
Meeting Info.: 93rd General Meeting of the American Society for Microbiology. Atlanta, Georgia, USA. May 16-20, 1993.
ISSN: 1060-2011.
DOCUMENT TYPE: Conference; (Meeting)
LANGUAGE: English
ENTRY DATE: Entered STN: 31 Jul 1993
Last Updated on STN: 31 Jul 1993

L18 ANSWER 78 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 93:351599 SCISEARCH
THE GENUINE ARTICLE: LE436
TITLE: IMPLICATIONS OF THE 3-DIMENSIONAL STRUCTURE OF ASTACIN FOR THE STRUCTURE AND FUNCTION OF THE ASTACIN FAMILY OF ZINC-ENDOPEPTIDASES
AUTHOR: STOCKER W (Reprint); GOMISRUTH F X; BODE W; ZWILLING R
CORPORATE SOURCE: UNIV HEIDELBERG, INST ZOOL, FACHRICHTUNG PHYSIOL, NEUENHEIMER FELD 230, W-6900 HEIDELBERG 1, GERMANY (Reprint); MAX PLANCK INST BIOCHEM, W-8033 MARTINSRIED, GERMANY
COUNTRY OF AUTHOR: GERMANY
SOURCE: EUROPEAN JOURNAL OF BIOCHEMISTRY, (15 MAY 1993) Vol. 214, No. 1, pp. 215-231.
ISSN: 0014-2956.
DOCUMENT TYPE: General Review; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 113
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 79 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:209738 HCAPLUS

DOCUMENT NUMBER: 120:209738
TITLE: Sequence diversity and organization of the msp gene family encoding gp63 of Leishmania chagasi
AUTHOR(S): Roberts, Sigrid C.; Swihart, Kristin G.; Agey, Michael W.; Ramamoorthy, Ramesh; Wilson, Mary E.; Donelson, John E.
CORPORATE SOURCE: Dep. Biochem., Univ. Iowa, Iowa City, IA, 52242, USA
SOURCE: Molecular and Biochemical Parasitology (1993), 62(2), 157-71
CODEN: MBIPDP; ISSN: 0166-6851
DOCUMENT TYPE: Journal
LANGUAGE: English

L18 ANSWER 80 OF 87 MEDLINE on STN DUPLICATE 21
ACCESSION NUMBER: 92279252 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1594604
TITLE: Extrachromosomal genetic complementation of surface metalloproteinase (gp63)-deficient Leishmania increases their binding to macrophages.
AUTHOR: Liu X; Chang K P
CORPORATE SOURCE: Department of Microbiology/Immunology, University of Health Sciences/Chicago Medical School, IL 60064.
CONTRACT NUMBER: AI-20486 (NIAID)
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (1992 Jun 1) 89 (11) 4991-5.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199206
ENTRY DATE: Entered STN: 19920710
Last Updated on STN: 20000303
Entered Medline: 19920626

L18 ANSWER 81 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 92:682677 SCISEARCH
THE GENUINE ARTICLE: JY669
TITLE: A **ZINC-PROTEASE** SPECIFIC DOMAIN IN BOTULINUM AND TETANUS NEUROTOXINS
AUTHOR: FUJII N (Reprint); KIMURA K; YOKOSAWA N; TSUZUKI K; OGUMA K
CORPORATE SOURCE: SAPPORO MED COLL, DEPT MICROBIOL, SOUTH 1, WEST 17, SAPPORO, HOKKAIDO 060, JAPAN (Reprint)
COUNTRY OF AUTHOR: JAPAN
SOURCE: TOXICON, (NOV 1992) Vol. 30, No. 11, pp. 1486-1488.
ISSN: 0041-0101.
DOCUMENT TYPE: Note; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 21
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 82 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 92:291997 SCISEARCH
THE GENUINE ARTICLE: HR526
TITLE: MUTATIONAL ANALYSIS REVEALS ONLY ONE CATALYTIC HISTIDINE IN NEUTRAL ENDOPEPTIDASE (ENKEPHALINASE)
AUTHOR: KIM Y A; SHRIVER B; HERSH L B (Reprint)
CORPORATE SOURCE: UNIV TEXAS, SW MED CTR, DEPT BIOCHEM, 5323 HARRY HINES BLVD, DALLAS, TX, 75235
COUNTRY OF AUTHOR: USA

SOURCE: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (30 APR 1992) Vol. 184, No. 2, pp. 883-887.
ISSN: 0006-291X.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 27

L18 ANSWER 83 OF 87 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1991:446691 HCAPLUS
DOCUMENT NUMBER: 115:46691
TITLE: Inhibition of **recombinant** human blood coagulation factor VIIa amidolytic and proteolytic activity by zinc ions
AUTHOR(S): Pedersen, Anders H.; Lund-Hansen, Torben; Komiyama, Yutaka; Petersen, Lars C.; Oestergaard, Per B.; Kisiel, Walter
CORPORATE SOURCE: Biopharm. Div., Novo-Nord., Bagsvaerd, Den.
SOURCE: Thrombosis and Haemostasis (1991), 65(5), 528-34
CODEN: THHADQ; ISSN: 0340-6245
DOCUMENT TYPE: Journal
LANGUAGE: English

L18 ANSWER 84 OF 87 MEDLINE on STN DUPLICATE 22
ACCESSION NUMBER: 91375620 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1716743
TITLE: Immunoautoradiographic localisation of enkephalinase (EC 3.4.24.11) in rat gastrointestinal tract.
AUTHOR: Pollard H; Moreau J; Ronco P; Verroust P; Schwartz J C
CORPORATE SOURCE: Unite de Neurobiologie et Pharmacologie (U 109) de l'Inserm, Centre Paul Broca, Paris, France.
SOURCE: Neuropeptides, (1991 Jul) 19 (3) 169-78.
Journal code: 8103156. ISSN: 0143-4179.
PUB. COUNTRY: SCOTLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199110
ENTRY DATE: Entered STN: 19911108
Last Updated on STN: 19970203
Entered Medline: 19911023

L18 ANSWER 85 OF 87 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 91:418570 SCISEARCH
THE GENUINE ARTICLE: FX813
TITLE: IMMUNOAUTORADIOGRAPHIC LOCALIZATION OF ENKEPHALINASE (EC-3.4.24.11) IN RAT GASTROINTESTINAL-TRACT
AUTHOR: POLLARD H (Reprint); MOREAU J; RONCO P; VERROUST P; SCHWARTZ J C
CORPORATE SOURCE: CTR PAUL BROCA, INSERM, U109, UNITE NEUROBIOL & PHARMACOL, 2TER RUE ALESIA, F-75014 PARIS, FRANCE (Reprint); HOP TENON, INSERM, U64, UNITE NEPHROL NORMALE & PATHOL, F-75970 PARIS 20, FRANCE
COUNTRY OF AUTHOR: FRANCE
SOURCE: NEUROPEPTIDES, (1991) Vol. 19, No. 3, pp. 169-178.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 54
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L18 ANSWER 86 OF 87 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN DUPLICATE 23

ACCESSION NUMBER: 1989:244547 BIOSIS
DOCUMENT NUMBER: PREV198987125612; BA87:125612
TITLE: AMINO ACID SEQUENCE DEDUCED FROM A RAT KIDNEY COMPLEMENTARY DNA SUGGESTS IT ENCODES THE **ZINC** **PEPTIDASE** AMINOPEPTIDASE N.
AUTHOR(S): WATT V M [Reprint author]; YIP C C
CORPORATE SOURCE: DEP PHYSIOL, UNIV TORONTO, TORONTO, CANADA M5S 1A8
SOURCE: Journal of Biological Chemistry, (1989) Vol. 264, No. 10, pp. 5480-5487.
CODEN: JBCHA3. ISSN: 0021-9258.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 20 May 1989
Last Updated on STN: 20 May 1989

L18 ANSWER 87 OF 87 MEDLINE on STN DUPLICATE 24
ACCESSION NUMBER: 89019388 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3051385
TITLE: How do enzymes work?.
AUTHOR: Kraut J
CORPORATE SOURCE: University of California, San Diego, La Jolla 92093.
SOURCE: Science, (1988 Oct 28) 242 (4878) 533-40. Ref: 65
Journal code: 0404511. ISSN: 0036-8075.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198811
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19900308
Entered Medline: 19881123

```
=> e hillman j l/au
E1          82     HILLMAN J J/AU
E2           5     HILLMAN J K/AU
E3         484 --> HILLMAN J L/AU
E4           1     HILLMAN J M/AU
E5           4     HILLMAN J M L/AU
E6           2     HILLMAN J O/AU
E7           9     HILLMAN J P/AU
E8         243     HILLMAN J R/AU
E9           2     HILLMAN J RICHARD/AU
E10        111     HILLMAN J S/AU
E11         21     HILLMAN J T/AU
E12         10     HILLMAN J V/AU

=> s e3
L19        484 "HILLMAN J L"/AU

=> e bandman o/au
E1           3     BANDMAN MARC A/AU
E2           1     BANDMAN MARC ALAN/AU
E3         385 --> BANDMAN O/AU
E4          20     BANDMAN O A/AU
E5          15     BANDMAN O L/AU
E6          64     BANDMAN OLG/AU
E7         361     BANDMAN OLGA/AU
E8           2     BANDMAN R/AU
E9           1     BANDMAN R L/AU
E10          4     BANDMAN T/AU
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E11           9      BANDMAN T B/AU
E12           7      BANDMAN T M/AU

=> s e3-e7
L20         845 ("BANDMAN O"/AU OR "BANDMAN O A"/AU OR "BANDMAN O L"/AU OR "BAND
                MAN OLG"/AU OR "BANDMAN OLGA"/AU)

=> e tang y t/au
E1          449      TANG Y S/AU
E2            6      TANG Y SIM/AU
E3          446 --> TANG Y T/AU
E4            1      TANG Y TANG/AU
E5          499      TANG Y TOM/AU
E6          429      TANG Y W/AU
E7            1      TANG Y W A/AU
E8            1      TANG Y W W/AU
E9          146      TANG Y X/AU
E10           3      TANG Y X P/AU
E11         154      TANG Y Y/AU
E12           2      TANG Y Y N/AU

=> s e3
L21         446 "TANG Y T"/AU

=> e azimzai y/au
E1            2      AZIMZADEH S/AU
E2            1      AZIMZADEHKHATAYLOO S/AU
E3          139 --> AZIMZAI Y/AU
E4            1      AZIMZAI YALD/AU
E5          151      AZIMZAI YALDA/AU
E6            3      AZIMZHANOVA B M/AU
E7            1      AZIMZHANOVA M M/AU
E8            1      AZIMZHONOVA M P/AU
E9            1      AZIN A/AU
E10           1      AZIN A D/AU
E11          94      AZIN A L/AU
E12           1      AZIN A P/AU

=> s e3-e5
L22         291 ("AZIMZAI Y"/AU OR "AZIMZAI YALD"/AU OR "AZIMZAI YALDA"/AU)

=> e yue h/au
E1           39      YUE GUOZHEN/AU
E2            1      YUE GUOZHEN Z/AU
E3          485 --> YUE H/AU
E4            1      YUE H A/AU
E5            3      YUE H B/AU
E6            3      YUE H C/AU
E7            1      YUE H D/AU
E8            6      YUE H F/AU
E9            3      YUE H G/AU
E10           7      YUE H H/AU
E11           4      YUE H HENRY/AU
E12          39      YUE H J/AU

=> s e3
L23         485 "YUE H"/AU

=> e baughn m r/au
E1            1      BAUGHN L E/AU
E2           16      BAUGHN M/AU
E3          350 --> BAUGHN M R/AU
E4            1      BAUGHN MARIA R/AU
E5           17      BAUGHN MARIAH/AU
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E6          389      BAUGHN MARIAH R/AU
E7            2      BAUGHN P/AU
E8            1      BAUGHN P F/AU
E9           48      BAUGHN R/AU
E10           3      BAUGHN R B/AU
E11         432      BAUGHN R E/AU
E12          22      BAUGHN R L/AU

=> s e3-e6
L24         757 ("BAUGHN M R"/AU OR "BAUGHN MARIA R"/AU OR "BAUGHN MARIAH"/AU
                OR "BAUGHN MARIAH R"/AU)

=> e lu d a m/au
E1         1446      LU D/AU
E2            5      LU D A/AU
E3          169 --> LU D A M/AU
E4            1      LU D A R/AU
E5           12      LU D B/AU
E6          154      LU D C/AU
E7            1      LU D C D C/AU
E8           10      LU D C T/AU
E9           36      LU D D/AU
E10           2      LU D D C/AU
E11           2      LU D D L/AU
E12           2      LU D D S/AU

=> s e3
L25         169 "LU D A M"/AU

=> d his

     (FILE 'HOME' ENTERED AT 13:16:50 ON 09 DEC 2004)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 13:17:17 ON 09 DEC 2004
L1        628423 S PEPTIDASE? OR PROTEINASE? OR PROTEASE?
L2        232488 S HUMAN AND L1
L3          1461 S ZINC(A) METALLOPROTEASE?
L4          3232 S ZINC AND L2
L5       6823002 S CLON? OR EXPRESS? OR RECOMBINANT
L6          1449 S L4 AND L5
L7          4633 S MATRIXIN OR HEMOPEXIN
L8            52 S L6 AND L7
L9            31 DUP REM L8 (21 DUPLICATES REMOVED)
L10         6055 S BRAIN (A)CANCER
L11            1 S L6 AND L10
L12          924 S ZINC (A)L1
L13            0 S L12 AND L10
L14            1 S L5 AND L1`2
L15          169 S L5 AND L12
L16            3 S L7 AND L15
L17            3 DUP REM L16 (0 DUPLICATES REMOVED)
L18           87 DUP REM L15 (82 DUPLICATES REMOVED)
                 E HILLMAN J L/AU
L19          484 S E3
                 E BANDMAN O/AU
L20          845 S E3-E7
                 E TANG Y T/AU
L21          446 S E3
                 E AZIMZAI Y/AU
L22          291 S E3-E5
                 E YUE H/AU
L23          485 S E3
                 E BAUGHN M R/AU
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L24          757 S E3-E6
                 E LU D A M/AU
L25          169 S E3

=> s l19 or l20 or l21 or l22 or l23 or l24 or l25
L26         2086 L19 OR L20 OR L21 OR L22 OR L23 OR L24 OR L25

=> s l6 and l26
L27           0 L6 AND L26

=> s l2 and l26
L28          61 L2 AND L26

=> dup rem l28
PROCESSING COMPLETED FOR L28
L29          43 DUP REM L28 (18 DUPLICATES REMOVED)

=> d 1-43 ibib

L29  ANSWER 1 OF 43  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2004:333826  HCAPLUS
DOCUMENT NUMBER:          140:333615
TITLE:                    Novel human protein modification and
                          maintenance molecules and their cDNAs and therapeutic
                          use
INVENTOR(S):              Khare, Reena; Swarnakar, Anita; Lee, Soo Yeun;
                          Baughn, Mariah R.; Tran, Uyen K.; Hafalia,
                          April J. A.; Elliott, Vicki S.; Marquis, Joseph P.;
                          Murage, Jagi; Ramkumar, Jayalaxmi; Richardson, Thomas
                          W.; Wang, Jonathan T.; Chien, David
PATENT ASSIGNEE(S):       Incyte Corporation, USA
SOURCE:                   PCT Int. Appl., 194 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     --------------       ----   --------    --------------------     --------
     WO 2004033636         A2    20040422    WO 2003-US31531          20031003
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,
             UG, US, UZ, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,
             GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,
             GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.:                   US 2002-416096P     P  20021004
                                         US 2002-420927P     P  20021023

L29  ANSWER 2 OF 43  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2004:270095  HCAPLUS
DOCUMENT NUMBER:          140:282467
TITLE:                    Novel human protein modification and
                          maintenance molecules and their cDNAs and therapeutic
                          use
INVENTOR(S):              Khare, Reena; Jin, Pei; Chawla, Narinder K.;
                          Swarnakar, Anita; Lee, Soo Yeun; Yang, Yonghong G.;
                          Baughn, Mariah R.; Tran, Uyen K.; Hafalia,
                          April J. A.; Elliott, Vicki S.; Marquis, Joseph P.;
```

Murage, Jagi; Ramkumar, Jayalaxmi; Richardson, Thomas W.; Wang, Jonathan T.; Chien, David

PATENT ASSIGNEE(S): Incyte Corporation, USA
SOURCE: PCT Int. Appl., 200 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004027039	A2	20040401	WO 2003-US29692	20030917

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-412376P P 20020920
US 2002-416096P P 20021004
US 2002-420927P P 20021023

L29 ANSWER 3 OF 43 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 2003:496262 BIOSIS
DOCUMENT NUMBER: PREV200300496456
TITLE: **Human proteinase** molecules.
AUTHOR(S): **Bandman, Olga** [Inventor, Reprint Author]; Corley, Neil C. [Inventor]; Guegler, Karl J. [Inventor]; **Baughn, Mariah R.** [Inventor]
CORPORATE SOURCE: ASSIGNEE: Incyte Corporation
PATENT INFORMATION: US 6627605 September 30, 2003
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Sep 30 2003) Vol. 1274, No. 5. http://www.uspto.gov/web/menu/patdata.html. e-file. ISSN: 0098-1133 (ISSN print).
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 22 Oct 2003
Last Updated on STN: 22 Oct 2003

L29 ANSWER 4 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2004-02525 BIOTECHDS
TITLE: New alpha-2-macroglobulin-like polypeptide and encoding polynucleotide, useful for diagnosing or treating disorders such as Alzheimer's disease, multiple sclerosis, rheumatoid arthritis, tumors, ischemia and viral infections; vector-mediated gene transfer and expression in host cell for recombinant protein production, drug screening and gene therapy
AUTHOR: GODBOLE S D; BOYLE B J; MIZE N K; DENG C; GOODRICH R W; ARTERBURN M C; ZHOU P; **TANG Y T**; LIU C; YEUNG G; DRMANAC R T
PATENT ASSIGNEE: GODBOLE S D; BOYLE B J; MIZE N K; DENG C; GOODRICH R W; ARTERBURN M C; ZHOU P; TANG Y T; LIU C; YEUNG G; DRMANAC R T
PATENT INFO: US 2003180722 25 Sep 2003
APPLICATION INFO: US 2001-756247 8 Jan 2001
PRIORITY INFO: US 2001-756247 8 Jan 2001; US 2000-496914 3 Feb 2000
DOCUMENT TYPE: Patent

LANGUAGE: English
OTHER SOURCE: WPI: 2003-852227 [79]

L29 ANSWER 5 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2003-19550 BIOTECHDS
TITLE: Novel purified **human** cathepsin protein, useful for treating, diagnosing, staging or monitoring progression or treatment of cell proliferation disorders e.g. lung cancer and complications of lung cancer; involving vector-mediated gene transfer and expression in host cell for use in diagnosis, prevention and therapy
AUTHOR: **BANDMAN O**; SHAH P; RICKERT P K
PATENT ASSIGNEE: BANDMAN O; SHAH P; RICKERT P K
PATENT INFO: US 2003036102 20 Feb 2003
APPLICATION INFO: US 2002-143650 8 May 2002
PRIORITY INFO: US 2002-143650 8 May 2002; US 1997-883526 26 Jun 1997
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2003-512248 [48]

L29 ANSWER 6 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:435072 HCAPLUS
DOCUMENT NUMBER: 139:21017
TITLE: Prostate-associated **protease** HUPAP, cDNA and antibodies for prognosis, diagnosis and treatment of prostate cancer
INVENTOR(S): Spancake, Kimberly M.; **Bandman, Olga**; Lal, Preeti G.
PATENT ASSIGNEE(S): Incyte Genomics, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 42 pp., Cont.-in-part of U.S. Ser. No. 988,975.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003103981	A1	20030605	US 2002-235699	20020904
US 6043033	A	20000328	US 1997-807151	19970227
US 6350448	B1	20020226	US 2000-478957	20000107
US 2002119531	A1	20020829	US 2001-988975	20011119

PRIORITY APPLN. INFO.:

US 1997-807151	A3	19970227
US 2000-478957	A2	20000107
US 2001-988975	A2	20011119

L29 ANSWER 7 OF 43 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
DUPLICATE 1
ACCESSION NUMBER: 2002:278022 BIOSIS
DOCUMENT NUMBER: PREV200200278022
TITLE: **Human** prostate-associated **protease**.
AUTHOR(S): **Bandman, Olga** [Inventor]; Lal, Preeti [Inventor]
CORPORATE SOURCE: ASSIGNEE: Incyte Genomics, Inc.
PATENT INFORMATION: US 6350448 February 26, 2002
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Feb. 26, 2002) Vol. 1255, No. 4. http://www.uspto.gov/web/menu/patdata.html. e-file.
CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 8 May 2002
Last Updated on STN: 8 May 2002

L29 ANSWER 8 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 2
ACCESSION NUMBER: 2002-16546 BIOTECHDS
TITLE: New **human proteases** useful for diagnosing, preventing or treating anorexia, myocardial infarction, Addison's disease, hepatitis, Cushing's syndrome, eczema, Parkinson's disease, and impotence;
vector-mediated recombinant protein gene transfer and expression in host cell for disease or disorder gene therapy
AUTHOR: LEE E A; HAFALIA A J A; **YUE H**; LAL P G; YAO M G; LU Y; WALIA N K; WARREN B A; **LU D A M**; **BAUGHN M R**; DELEGEANE A M; BURFORD N; BOROWSKY M L; LEE S; XU Y; GRIFFIN J A; KALLICK D A; GANDHI A R; ARVIZU C; ISON C H; **TANG Y T**; **AZIMZAI Y**; ELILIOTT V S; SWARNAKAR A; RAMKUMAR J; NGUYEN D B; TRIBOULEY C M; LO T P; AU-YOUNG J; THANGAVELU K; KEARNEY L
PATENT ASSIGNEE: INCYTE GENOMICS INC
PATENT INFO: WO 2002038744 16 May 2002
APPLICATION INFO: WO 2000-US51034 18 Oct 2000
PRIORITY INFO: US 2000-250981 1 Dec 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-463471 [49]

L29 ANSWER 9 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 3
ACCESSION NUMBER: 2002-13166 BIOTECHDS
TITLE: New purified **proteases** and polynucleotides, useful for diagnosing, treating or preventing disorders of gastrointestinal, cardiovascular, cell proliferative, developmental, epithelial, neurological and reproductive systems;
vector-mediated gene transfer, expression in host cell, transgenic animal and antibody for recombinant protein production, drug screening and gene therapy
AUTHOR: TODD S; DELEGEANE A M; GANDHI A R; NGUYEN D B; HAFALIA A J A; KEARNEY L; LU Y; LEE E A; WALIA N K; DAS D; PATTERSON C; YAO M G; KALLICK D A; ELLIOTT V S; DING L; **YUE H**; REDDY R; **LU D A M**; RAMKUMAR J; YANG J; TRIBOULEY C M; BURFORD N; **BAUGHN M R**; LAL P; BOROWSKY M L; KHAN F A; GURURAJAN R; **TANG Y T**; AU-YOUNG J; WARREN B A; HERNANDEZ R; DUGGAN B M
PATENT ASSIGNEE: INCYTE GENOMICS INC
PATENT INFO: WO 2002020736 14 Mar 2002
APPLICATION INFO: WO 2000-US28161 8 Sep 2000
PRIORITY INFO: US 2000-239658 12 Oct 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-351775 [38]

L29 ANSWER 10 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 4
ACCESSION NUMBER: 2002-10809 BIOTECHDS
TITLE: New **human protease** polypeptide, useful in diagnosis, prevention and treatment of gastrointestinal, cardiovascular, autoimmune/inflammatory, cell proliferative, developmental, epithelial and neurological disorders;
vector-mediated gene transfer and expression in hybridoma, monoclonal antibody, transgenic animal model construction, polymerase chain reaction, agonist, antagonist, chimeric antibody, single chain antibody, Fab and humanizedantibody for use in drug screening, diagnosis, prevention, therapy and gene therapy

AUTHOR: DELEGEANE A M; GANDHI A R; HAFALIA A J A; **LU D A M**; PATTERSON C; TRIBOULEY C M; DAS D; KALLICK D A; NGUYEN D B; LEE E A; KHAN F A; **YUE H**; AU-YOUNG J; GRIFFIN J A; POLICKY J L; RAMKUMAR J; YANG J; THANGAVELU K; DING L; KEARNEY L; **BAUGHN M R**; BOROWSKY M L; SANJANWALA M S; YAO M G; BURFORD N; WALIA N K; LAL P; LEE S; TODD S; LO T P; **TANG Y T**; ELLIOTT V S; **AZIMZAI Y**; LU Y
PATENT ASSIGNEE: INCYTE GENOMICS INC
PATENT INFO: WO 2002008396 31 Jan 2002
APPLICATION INFO: WO 2000-US22397 21 Jul 2000
PRIORITY INFO: US 2000-227568 23 Aug 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-206082 [26]

L29 ANSWER 11 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 5
ACCESSION NUMBER: 2003-01793 BIOTECHDS
TITLE: Novel **human** prostate-associated **protease** (HUPAP), useful for treating gastrointestinal disorders such as congenital enterokinase deficiency and for producing anti-HUPAP antibodies;
plasmid-mediated recombinant protein gene transfer and expression in host cell and hybridoma cell culture for monoclonal antibody, humanized antibody and single chain antibody production for disease diagnosis and therapy
AUTHOR: **BANDMAN O**; LAL P G
PATENT ASSIGNEE: BANDMAN O; LAL P G
PATENT INFO: US 2002119531 29 Aug 2002
APPLICATION INFO: US 2001-988975 19 Nov 2001
PRIORITY INFO: US 2001-988975 19 Nov 2001; US 1997-807151 27 Feb 1997
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-627171 [67]

L29 ANSWER 12 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2002-17113 BIOTECHDS
TITLE: Novel **human** transmembrane proteins and polynucleotides useful for diagnosing, treating or preventing infertility, anemia, hypertension, anorexia, hypercholesterolemia, cancer, gout, Grave's disease;
plasmid-mediated recombinant protein gene transfer and expression in Escherichia coli and transgenic animal, DNA microarray and computer bioinformatic software for disease prevention, diagnosis and gene therapy
AUTHOR: WARREN B A; XU Y; **YUE H**; BATRA S; BURFORD N; GANDHI A R; WALIA N K; ARVIZU C; **TANG Y T**; **LU D A M**; DUGGAN B M; **BAUGHN M R**; LEE E A; KHAN F A; NGUYEN D B; **AZIMZAI Y**; YAO M G; LAL P G; THANGAVELU K; RAMKUMAR J; TRAN B; DING L; AU-YOUNG J
PATENT ASSIGNEE: INCYTE GENOMICS INC
PATENT INFO: WO 2002034783 2 May 2002
APPLICATION INFO: WO 2000-US49670 27 Oct 2000
PRIORITY INFO: US 2000-255085 12 Dec 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-463354 [49]

L29 ANSWER 13 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:594884 HCAPLUS
DOCUMENT NUMBER: 137:151105
TITLE: **Human** PMMM proteins as sequence homologs of **proteinases** with possible diagnostic and therapeutic uses

INVENTOR(S): Warren, Bridget A.; Honchell, Cynthia D.; Lu, Yan; Walia, Narinder K.; Burford, Neil; Delegeane, Angelo M.; Gandhi, Ameena R.; **Baughn, Mariah R.**; Griffin, Jennifer A.; Gietzen, Kimberly J.; Lu, Dyung Aina M.; Ison, Craig H.; Ramkumar, Jayalaxmi; Tang, Tom Y.; Lal, Preeti G.; Borowski, Mark L.; Duggan, Brendan M.; Hafalia, April J. A.; Arvizu, Chandra; Thangavelu, Kavitha; Yao, Monique G.; Elliott, Vicki S.; Ding, Li; Yue, Henry; Lee, Sally; Swarnakar, Anita; Tran, Uyen K.; Xu, Yuming

PATENT ASSIGNEE(S): Incyte Genomics, Inc., USA; et al.

SOURCE: PCT Int. Appl., 172 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002060942	A2	20020808	WO 2002-US2813	20020130
WO 2002060942	A3	20030724		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2434953	AA	20020808	CA 2002-2434953	20020130
EP 1356028	A2	20031029	EP 2002-723076	20020130
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004077048	A1	20040422	US 2003-467042	20030731

PRIORITY APPLN. INFO.:

US 2001-265705P	P	20010131
US 2001-266762P	P	20010205
US 2001-269581P	P	20010216
US 2001-271198P	P	20010223
US 2001-272813P	P	20010301
US 2001-275586P	P	20010313
US 2001-278505P	P	20010323
US 2001-280539P	P	20010330
WO 2002-US2813	W	20020130

L29 ANSWER 14 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 6

ACCESSION NUMBER: 2002-07460 BIOTECHDS

TITLE: Twenty one **human proteases** (referred to as PRTS-1 to PRTS-21), useful in the diagnosis, treatment and prevention of gastrointestinal (e.g. gastritis), cardiovascular (e.g. atherosclerosis) and cell proliferative (e.g. cancer)disorders;
vector-mediated recombinant enzyme gene transfer and expression in host cell, transgenic animal, hybridoma cell culture for monoclonal antibody production, DNA probe, cDNA library, database, algorithm and bioinformaticsoftware for developmental, epithelial, neurological, reproductive disease gene therapy

AUTHOR: **YUE H**; ELLIOTT V S; GANDHI A R; LAL P; AU-YOUNG J; TRIBOULEY C M; DELEGEANE A M; **BAUGHN M R**; NGUYEN D B; LEE E A; HAFALIA A; KHAN F A; WALIA N K; YAO M G; **LU**

D A M; PATTERSON C; **TANG Y T**; WALSH R T; **AZIMZAI Y**; LU Y; RAMKUMAR J; XU Y; REDDY R; DAS D; KEARNEY L; KALLICK D A

PATENT ASSIGNEE: INCYTE GENOMICS INC
PATENT INFO: WO 2001098468 27 Dec 2001
APPLICATION INFO: WO 2000-US19178 16 Jun 2000
PRIORITY INFO: US 2000-218946 14 Jul 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-090437 [12]

L29 ANSWER 15 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 7
ACCESSION NUMBER: 2002-04114 BIOTECHDS
TITLE: Novel **human proteases** and polynucleotides encoding the **proteases**, useful for treating, diagnosing or preventing cell proliferative, cardiovascular, autoimmune/inflammatory, neurological and developmental disorders;
involving vector plasmid-mediated gene transfer for expression in Escherichia coli, for use in gene therapy, transgenic animal model construction and drug screening
AUTHOR: Delegeane A M; Lal P; Hafalia A; Patterson C; Walia N K; Kearney L; Tribouley C M; Khan F A; Yao M G; **Baughn M R**; **Azimzai Y**; Elliott V; Nguyen D B; Gandhi A R; Yang J; Hernandez R; Policky J L; **Lu D A M**; Reddy R; **Yue H**; **Tang Y T**
PATENT ASSIGNEE: Incyte-Genomics
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 2001083775 8 Nov 2001
APPLICATION INFO: WO 2001-US14651 4 May 2001
PRIORITY INFO: US 2000-209402 1 Jun 2000; US 2000-202082 4 May 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-034518 [04]

L29 ANSWER 16 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 8
ACCESSION NUMBER: 2002-02340 BIOTECHDS
TITLE: New polypeptide for treating gastrointestinal, cardiovascular and autoimmune disorders, comprises novel **human proteases** (PRTS) and polynucleotides;
recombinant **human proteases** for disease therapy, diagnosis, and drug screening
AUTHOR: **Yue H**; **Lu D A M**; Policky J L; Delegeane A M; Tribouley C M; Khan F A; Au-Young J; **Bandman O**; Lal P; Borowsky M L; Gandhi A R; **Hillman J L**; **Tang Y T**; Burford N; **Baughn M R**; Nguyen D B; Yao M G; Walia N K; He A; Hafalia A; Lu Y; Patterson C
PATENT ASSIGNEE: Incyte-Genomics
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 2001071004 27 Sep 2001
APPLICATION INFO: WO 2001-US8441 16 Mar 2001
PRIORITY INFO: US 2000-200227 28 Apr 2000; US 2000-190708 17 Mar 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2001-611509 [70]

L29 ANSWER 17 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 9
ACCESSION NUMBER: 2001-13556 BIOTECHDS
TITLE: Novel **human protease** protein (PRTS) useful for diagnosing, treating, preventing gastrointestinal, cardiovascular, autoimmune/inflammatory, cell proliferative

disorders associated with abnormal expression of PRTS; recombinant protein gene production useful in gene therapy and drug screening

AUTHOR: Yang J; **Baughn M R**; Burford N; Au-Young J; **Lu D A M**; Reddy R; **Yue H**; Nguyen D B; **Tang Y T**; Yao M G; Lal P

PATENT ASSIGNEE: Incyte-Genomics

LOCATION: Palo Alto, CA, USA.

PATENT INFO: WO 2001046443 28 Jun 2001

APPLICATION INFO: WO 2000-US34811 19 Dec 2000

PRIORITY INFO: US 2000-179903 2 Feb 2000; US 1999-172055 23 Dec 1999

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: WPI: 2001-418080 [44]

L29 ANSWER 18 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 10

ACCESSION NUMBER: 2001-07759 BIOTECHDS

TITLE: New **protease** (inhibitor) useful for diagnosis and treatment of autoimmune/inflammatory disorders such as acquired immunodeficiency syndrome, Cushing disease, Addison's disease and cell proliferative disorders such as cancer;
human recombinant **protease**-inhibitor production via plasmid pBLUESCRIPT expression in Escherichia coli for gene therapy

AUTHOR: Yu H; Lal P; **Tang Y T**; **Bandman O**; **Baughn M R**; **Azimzai Y**; **Lu D A M**; Yang J

PATENT ASSIGNEE: Incyte-Genomics

LOCATION: Palo Alto, CA, USA.

PATENT INFO: WO 2001010903 15 Feb 2001

APPLICATION INFO: WO 2000-US21878 9 Aug 2000

PRIORITY INFO: US 1999-160807 21 Oct 1999; US 1999-147986 9 Aug 1999

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: WPI: 2001-202760 [20]

L29 ANSWER 19 OF 43 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 2001:499747 BIOSIS

DOCUMENT NUMBER: PREV200100499747

TITLE: **Human proteinase** molecules.

AUTHOR(S): **Bandman, Olga** [Inventor]; Hillman, Jennifer L. [Inventor]; Corley, Neil C. [Inventor]; Guegler, Karl J. [Inventor]; **Baughn, Mariah R.** [Inventor]

CORPORATE SOURCE: ASSIGNEE: Incyte Genomics, Inc.

PATENT INFORMATION: US 6232454 May 15, 2001

SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (May 15, 2001) Vol. 1246, No. 3. e-file. CODEN: OGUPE7. ISSN: 0098-1133.

DOCUMENT TYPE: Patent

LANGUAGE: English

ENTRY DATE: Entered STN: 24 Oct 2001
Last Updated on STN: 23 Feb 2002

L29 ANSWER 20 OF 43 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 2001:424540 BIOSIS

DOCUMENT NUMBER: PREV200100424540

TITLE: **Human protease** molecules.

AUTHOR(S): **Bandman, Olga** [Inventor]; Hillman, Jennifer L. [Inventor]; Yue, Henry [Inventor]; Guegler, Karl J. [Inventor]; Corley, Neil C. [Inventor]; Tang, Y. Tom

[Inventor]; Shah, Purvi [Inventor]
CORPORATE SOURCE: ASSIGNEE: Incyte Pharmaceuticals, Inc.
PATENT INFORMATION: US 6203979 March 20, 2001
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Mar. 20, 2001) Vol. 1244, No. 3. e-file. CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Sep 2001
Last Updated on STN: 22 Feb 2002

L29 ANSWER 21 OF 43 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN DUPLICATE 11
ACCESSION NUMBER: 2000:430020 BIOSIS
DOCUMENT NUMBER: PREV200000430020
TITLE: **Human** prostate-associated **protease**.
AUTHOR(S): **Bandman, Olg** [Inventor]; Lal, Preeti [Inventor]
CORPORATE SOURCE: ASSIGNEE: Incyte Pharmaceuticals, Inc.
PATENT INFORMATION: US 6043033 March 28, 2000
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Mar. 28, 2000) Vol. 1232, No. 4. e-file. CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 11 Oct 2000
Last Updated on STN: 10 Jan 2002

L29 ANSWER 22 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN DUPLICATE 12
ACCESSION NUMBER: 2000-12639 BIOTECHDS
TITLE: An isolated peptide for diagnosis, prevention and treatment of cell proliferative, autoimmune/inflammatory and metabolic disorders comprises a sequence encoding a **human peptidase**;
method is useful for treating disease
AUTHOR: **Bandman O**; **Hillman J L**; **Tang Y T**; **Azimzai Y**; **Baughn M R**; Lal P; **Yue H**; **Lu D A M**
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 2000042201 20 Jul 2000
APPLICATION INFO: WO 2000-US641 11 Jan 2000
PRIORITY INFO: US 1999-136653 27 May 1999; US 1999-172247 11 Jan 1999
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2000-482832 [42]

L29 ANSWER 23 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN DUPLICATE 13
ACCESSION NUMBER: 2000-06538 BIOTECHDS
TITLE: New **human proteases**, useful for diagnosis, treatment and prevention of cell proliferative disorders such as atherosclerosis;
expression in host cell, antibody, agonist, antagonist, DNA probe and DNA primer
AUTHOR: **Bandman O**; **Hillman J L**; Baughn M; **Azimzai Y**; Guegler K J; Corley N C; **Yue H**; **Tang Y T**; Reddy R; Patterson C; Au-Young J; Shih L L; **Lu D A M**
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 2000009709 24 Feb 2000
APPLICATION INFO: WO 1999-US17818 6 Aug 1999
PRIORITY INFO: US 1999-119768 11 Feb 1999; US 1998-96114 10 Aug 1998

DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2000-224346 [19]

L29 ANSWER 24 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 14
ACCESSION NUMBER: 2000-05873 BIOTECHDS
TITLE: New **human** aspartic **protease** polypeptide useful for treating and detecting endocrinological disorders e.g. hypogonadism, Sheehan syndrome and diabetes insipidus; and for treating and preventing cancers, immunological disorder, inflammatory diseases, microbial infections, respiratory disorders
AUTHOR: Xu H; Bruno S A; Elsenboss L A; Fogliano M; Cohan V L; **Bandman O**
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 2000004137 27 Jan 2000
APPLICATION INFO: WO 1999-US15988 15 Jul 1999
PRIORITY INFO: US 1998-116641 16 Jul 1998
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2000-182413 [16]

L29 ANSWER 25 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:628257 HCAPLUS
DOCUMENT NUMBER: 133:218536
TITLE: **Human** secretory proteins and their encoding cDNAs
INVENTOR(S): Tang, Y. Tom; Lal, Preeti; **Baughn, Mariah R.**; Yue, Henry; Au-young, Janice; Lu, Dyung Aina M.; **Azimzai, Yalda**
PATENT ASSIGNEE(S): Incyte Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 107 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000052151	A2	20000908	WO 2000-US5621	20000303
WO 2000052151	A3	20010426		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2363684	AA	20000908	CA 2000-2363684	20000303
EP 1165766	A2	20020102	EP 2000-912168	20000303
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002537805	T2	20021112	JP 2000-602763	20000303
PRIORITY APPLN. INFO.:			US 1999-123117P P	19990305
			WO 2000-US5621 W	20000303

L29 ANSWER 26 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 15
ACCESSION NUMBER: 1999-14508 BIOTECHDS

TITLE: New **human protease** molecules 1-3, useful for e.g. diagnosis, prevention and treatment of cancer and immune disorders;
recombinant protein production via vector plasmid pSport-mediated gene transfer and expression in Escherichia coli, COS-7, HeLa or CHO cell culture
AUTHOR: **Bandman O**; **Hillman J L**; Corley N C; Guegler K J; **Baughn M R**
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 9943832 2 Sep 1999
APPLICATION INFO: WO 1999-US2632 8 Feb 1999
PRIORITY INFO: US 1998-32523 27 Feb 1998
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1999-540600 [45]

L29 ANSWER 27 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 16
ACCESSION NUMBER: 1999-12044 BIOTECHDS
TITLE: Novel **human protease** molecules useful in the treatment of developmental disorders and/or cancers;
plasmid pSportI-mediated gene transfer and expression in Escherichia coli, antibody, antagonist, agonist and DNA probe used for immune or cell proliferation disorder therapy and drug screening
AUTHOR: **Bandman O**; **Hillman J L**; **Yue H**; Guegler K J; Corley N C; **Tang Y T**; Shah P
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 9936550 22 Jul 1999
APPLICATION INFO: WO 1999-US655 12 Jan 1999
PRIORITY INFO: US 1998-8271 16 Jan 1998
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1999-430616 [36]

L29 ANSWER 28 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
DUPLICATE 17
ACCESSION NUMBER: 1999-05297 BIOTECHDS
TITLE: New DNA encoding mitochondrial processing **peptidase** subunit;
human recombinant enzyme fragment, useful for treating smooth muscle disorders including angina, cardiovascular shock, cancer, amnesia, epilepsy and myopathy, etc.
AUTHOR: **Bandman O**; Shah P; Corley N C
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: US 5869311 9 Feb 1999
APPLICATION INFO: US 1997-895521 17 Jul 1997
PRIORITY INFO: US 1997-895521 17 Jul 1997
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1999-152778 [13]

L29 ANSWER 29 OF 43 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2000:290853 BIOSIS
DOCUMENT NUMBER: PREV200000290853
TITLE: Mitochondrial processing **peptidase** subunit.
AUTHOR(S): **Bandman, Olg** [Inventor]; Lal, Preeti [Inventor]; Corley, Neil C. [Inventor]
CORPORATE SOURCE: ASSIGNEE: Incyte Pharmaceuticals, Inc.

PATENT INFORMATION: US 6001629 December 14, 1999
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Dec. 14, 1999) Vol. 1229, No. 2. e-file. CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 6 Jul 2000
Last Updated on STN: 7 Jan 2002

L29 ANSWER 30 OF 43 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 1999:96581 BIOSIS
DOCUMENT NUMBER: PREV199900096581
TITLE: **Human** serine **protease** precursor.
AUTHOR(S): **Hillman, J. L.** [Inventor]; Corley, N. C. [Inventor]; Shah, P. [Inventor]
CORPORATE SOURCE: San Jose, Calif., USA
ASSIGNEE: INCYTE PHARMACEUTICALS, INC.
PATENT INFORMATION: US 5858758 Jan. 12, 1999
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Jan. 12, 1999) Vol. 1218, No. 2, pp. 1270. print.
CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 4 Mar 1999
Last Updated on STN: 4 Mar 1999

L29 ANSWER 31 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2000-02922 BIOTECHDS
TITLE: Novel **human protease** associated proteins used for, e.g. the diagnosis and prevention of cell proliferation and immune disorders; therapy and gene therapy
AUTHOR: **Hillman J L**; **Tang Y T**; Lal P; Corley N C; Guegler K J; Patterson C
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 9957274 11 Nov 1999
APPLICATION INFO: WO 1999-US9190 28 Apr 1999
PRIORITY INFO: US 1998-71709 1 May 1998
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2000-062147 [05]

L29 ANSWER 32 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2000-02914 BIOTECHDS
TITLE: Novel protein used for prevention, diagnosis and treatment of reproductive, developmental, neoplastic and immunological disorders; **human** growth-associated **protease** -inhibitor heavy chain precursor protein expression in host cell, antibody, agonist, antagonist, DNA probe and DNA primer for gene therapy
AUTHOR: **Hillman J L**; Guegler K J; Patterson C
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 9957140 11 Nov 1999
APPLICATION INFO: WO 1999-US9947 5 May 1999
PRIORITY INFO: US 1998-74579 7 May 1998
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2000-052939 [04]

L29 ANSWER 33 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2000-01638 BIOTECHDS
TITLE: New prostate-associated serum **protease** and polynucleotides which identify and encode PRASP, useful for treating reproductive disorders and cancer;
expression in host cell, antibody, agonist, antagonist and DNA probe used for gene therapy, diagnosis and drug screening
AUTHOR: **Tang Y T**; Corley N C; Guegler K J
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 9941387 19 Aug 1999
APPLICATION INFO: WO 1999-US2571 5 Feb 1999
PRIORITY INFO: US 1998-25059 17 Feb 1998
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2000-012993 [01]

L29 ANSWER 34 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 1999-03376 BIOTECHDS
TITLE: **Human** cathepsin, LCAP;
expression in host cell, used for cancer and immune disease therapy or prevention
AUTHOR: **Bandman O**; Guegler K J; Corley N C; Shah P
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 9900508 7 Jan 1999
APPLICATION INFO: WO 1998-US12863 19 Jun 1998
PRIORITY INFO: US 1997-883526 26 Jun 1997
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1999-095753 [08]

L29 ANSWER 35 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2000-01635 BIOTECHDS
TITLE: New polynucleotide encoding a microsomal signal **peptidase** subunit, useful in the treatment, prevention and diagnosis of cancer, smooth muscle disorders and immunological disorders;
human recombinant ADH Q-reductase membrane anchor protein production via vector plasmid pSPORT1-mediated gene transfer and expression in Escherichia coli for gene therapy
AUTHOR: **Hillman J L**; Goli S K
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: US 5985638 16 Nov 1999
APPLICATION INFO: US 1997-824577 26 Mar 1997
PRIORITY INFO: US 1997-824577 26 Mar 1997
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2000-012794 [01]

L29 ANSWER 36 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 1999-02068 BIOTECHDS
TITLE: New **human** serine **protease** precursor and related nucleic acid vectors;
recombinant production by vector expression in Escherichia coli and DNA probe, antibody, antisense, agonist and antagonist for disease therapy
AUTHOR: **Hillman J L**; Corley N C; Shah P
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 9850424 12 Nov 1998

APPLICATION INFO: WO 1998-US9096 6 May 1998
PRIORITY INFO: US 1997-851974 7 May 1997
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1999-034707 [03]

L29 ANSWER 37 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 1999-00951 BIOTECHDS
TITLE: New isolated **human** tumor-associated Kazal inhibitor ;
vector-mediated gene transfer and expression in colon tissue, DNA probe, antibody and antagonist for cancer diagnosis, therapy and gene therapy
AUTHOR: **Bandman O**; Guegler K J; Shah P
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 9846758 22 Oct 1998
APPLICATION INFO: WO 1998-US7598 14 Apr 1998
PRIORITY INFO: US 1997-839709 14 Apr 1997
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1998-594581 [50]

L29 ANSWER 38 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 1999-02657 BIOTECHDS
TITLE: **Human** kallikrein polypeptide, HKALL;
a **human** stratum corneum chymotryptic enzyme homolog, used for eczema, psoriasis, scleroderma, cancer, leukemia, etc. therapy, gene therapy, diagnosis, drug screening and mapping
AUTHOR: **Hillman J L**; Lal P
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 9842849 1 Oct 1998
APPLICATION INFO: WO 1998-US5939 25 Mar 1998
PRIORITY INFO: US 1997-824874 26 Mar 1997
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1999-070073 [06]

L29 ANSWER 39 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 1998-09555 BIOTECHDS
TITLE: New isolated prostate-associated kallikrein;
expression vector, antibody, and antagonist of kallikrein for use in prostate cancer therapy
AUTHOR: **Hillman J L**; Goli S K
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 9832865 30 Jul 1998
APPLICATION INFO: WO 1998-US1440 26 Jan 1998
PRIORITY INFO: US 1997-790137 29 Jan 1997
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1998-427961 [36]

L29 ANSWER 40 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 1998-07568 BIOTECHDS
TITLE: New ubiquitin-conjugating enzyme and related nucleic acid, vectors and transformed cells;
human recombinant enzyme preparation by vector expression in host cell, DNA probe, antisense DNA and ribozyme, used for disease diagnosis, therapy or gene therapy
AUTHOR: **Bandman O**; Goli S K

PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 9821318 22 May 1998
APPLICATION INFO: WO 1997-US20601 7 Nov 1997
PRIORITY INFO: US 1996-748703 13 Nov 1996
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1998-297925 [26]

L29 ANSWER 41 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 1998-07540 BIOTECHDS
TITLE: New isolated prostate-specific kallikrein; recombinant tissue kallikrein preparation and antisense nucleic acid for prostate cancer therapy and diagnosis
AUTHOR: **Bandman O**; Goli S K
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 9820117 14 May 1998
APPLICATION INFO: WO 1997-US20051 31 Oct 1997
PRIORITY INFO: US 1996-744026 5 Nov 1996
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1998-286933 [25]

L29 ANSWER 42 OF 43 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
ACCESSION NUMBER: 1998-04810 BIOTECHDS
TITLE: DNA encoding **human** kallikrein; recombinant enzyme preparation following vector expression in host cell and antibody for e.g. hypertension gene therapy
AUTHOR: Au-Young J; **Bandman O**; Braxton S M; Goli S K
PATENT ASSIGNEE: Incyte-Pharm.
LOCATION: Palo Alto, CA, USA.
PATENT INFO: WO 9803665 29 Jan 1998
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PRIORITY INFO: US 1996-681151 22 Jul 1996
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1998-120785 [11]

L29 ANSWER 43 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:324889 HCAPLUS
DOCUMENT NUMBER: 129:24175
TITLE: Cloning of **human** tumor-associated Kazal inhibitor with PEC-60 homology and its diagnostic and therapeutic uses
INVENTOR(S): **Bandman, Olga**; Goli, Surya K.; Murry, Lynn E.
PATENT ASSIGNEE(S): Incyte Pharmaceuticals, Inc., USA; Bandman, Olga; Goli, Surya K.; Murry, Lynn E.
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
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PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9820132	A1	19980514	WO 1997-US20204	19971105
W: AT, AU, CA, CH, CN, DE, DK, ES, FI, GB, IL, JP, KR, MX, NO, NZ, RU, SE, SG, US, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,				

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          GN, ML, MR, NE, SN, TD, TG
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     CA 2270173            AA    19980514    CA 1997-2270173         19971105
     AU 9851696            A1    19980529    AU 1998-51696           19971105
     EP 942980             A1    19990922    EP 1997-946544          19971105
        R:  BE, DE, ES, FR, GB, IT, NL
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PRIORITY APPLN. INFO.:                       US 1996-744670      A2  19961106
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REFERENCE COUNT:          5      THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
                                 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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     (FILE 'HOME' ENTERED AT 13:16:50 ON 09 DEC 2004)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 13:17:17 ON 09 DEC 2004
L1        628423 S PEPTIDASE? OR PROTEINASE? OR PROTEASE?
L2        232488 S HUMAN AND L1
L3          1461 S ZINC(A) METALLOPROTEASE?
L4          3232 S ZINC AND L2
L5       6823002 S CLON? OR EXPRESS? OR RECOMBINANT
L6          1449 S L4 AND L5
L7          4633 S MATRIXIN OR HEMOPEXIN
L8            52 S L6 AND L7
L9            31 DUP REM L8 (21 DUPLICATES REMOVED)
L10         6055 S BRAIN (A)CANCER
L11            1 S L6 AND L10
L12          924 S ZINC (A)L1
L13            0 S L12 AND L10
L14            1 S L5 AND L1`2
L15          169 S L5 AND L12
L16            3 S L7 AND L15
L17            3 DUP REM L16 (0 DUPLICATES REMOVED)
L18           87 DUP REM L15 (82 DUPLICATES REMOVED)
                 E HILLMAN J L/AU
L19          484 S E3
                 E BANDMAN O/AU
L20          845 S E3-E7
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L21          446 S E3
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L22          291 S E3-E5
                 E YUE H/AU
L23          485 S E3
                 E BAUGHN M R/AU
L24          757 S E3-E6
                 E LU D A M/AU
L25          169 S E3
L26         2086 S L19 OR L20 OR L21 OR L22 OR L23 OR L24 OR L25
L27            0 S L6 AND L26
L28           61 S L2 AND L26
L29           43 DUP REM L28 (18 DUPLICATES REMOVED)
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	Issue Date	Pages	Document ID	Title
1	20041118	274	US 20040229367 A1	Methods for monitoring multiple gene expression
2	20041104	48	US 20040220100 A1	Multi-component biological transport systems
3	20041028	13	US 20040213758 A1	Hydroxyamate-containing materials for the inhibition of matrix metalloproteinases
4	20040909	113	US 20040175385 A1	Therapeutic monoclonal antibodies that neutralize botulinum neurotoxins
5	20040902	26	US 20040170972 A1	Ehrlichia canis genes and vaccines
6	20040819	45	US 20040162345 A1	Compounds with NEP/MP-inhibitory activity and uses thereof
7	20040729	23	US 20040146532 A1	Agents and methods for treating pain
8	20040520	10	US 20040096817 A1	Model for in vitro adhesion development
9	20040226	37	US 20040038896 A1	Isolated human protease proteins, nucleic acid molecules encoding human protease proteins, and uses thereof
10	20040129	113	US 20040018561 A1	Peptide compounds and their use as protease substrates
11	20040122	25	US 20040014939 A1	Novel protease gene
12	20040115	286	US 20040009551 A1	Ricin-like toxin variants for treatment of cancer, viral or parasitic infections
13	20030703	61	US 20030124529 A1	Pregnancy-associated plasma protein-A2 (PAPP-A2)

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14	20030612	206	US 20030109021 A1	Polynucleotide encoding a novel metalloprotease highly expressed in the testis, MMP-29
15	20030508	124	US 20030087807 A1	Methods for identifying compounds for motion sickness, vertigo and other disorders related to balance and the perception of gravity
16	20030403	171	US 20030065156 A1	Novel human genes and gene expression products I
17	20030227	41	US 20030040471 A1	Compositions isolated from skin cells and methods for their use
18	20030220	38	US 20030036167 A1	Isolated human protease proteins, nucleic acid molecules encoding human protease proteins, and uses thereof
19	20030130	43	US 20030022835 A1	Compositions isolated from skin cells and methods for their use
20	20030109	23	US 20030008821 A1	Methods of preventing UVB-induced skin damage
21	20021128	36	US 20020177545 A1	Compositions and methods for treating gonadotrophin related illnesses
22	20021114	99	US 20020168727 A1	Recombinant light chains of botulinum neurotoxins and light chain fusion proteins for use in research and clinical therapy
23	20020613	37	US 20020072106 A1	Isolated human protease proteins, nucleic acid molecules encoding human protease proteins, and uses thereof
24	20020404	45	US 20020040489 A1	Expressed sequences of arabidopsis thaliana

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25	20020221	49	US 20020023281 A1	Expressed sequences of arabidopsis thaliana
26	20011101	30	US 20010036955 A1	Method of inhibiting angiogenesis
27	20041012	280	US 6803358 B1	Ricin-like toxin variants for treatment of cancer, viral or parasitic infections
28	20040914	26	US 6790649 B1	Composition, methods and reagents for the synthesis of a soluble form of human PHEX
29	20040907	21	US 6787517 B1	Agent and methods for treating pain
30	20040330	21	US 6712617 B2	Methods of preventing UVB-induced skin damage
31	20031028	35	US 6638751 B2	Isolated human zinc protease proteins
32	20030715	336	US 6593132 B1	Ricin-like toxin variants for treatment of cancer, viral or parasitic infections
33	20030422	455	US 6551795 B1	Nucleic acid and amino acid sequences relating to pseudomonas aeruginosa for diagnostics and therapeutics
34	20030422	119	US 6551575 B1	Methods for identifying compounds for motion sickness, vertigo and other disorders related to balance and the perception of gravity
35	20021008	35	US 6461850 B2	Isolated nucleic acid molecules encoding protease proteins, and uses thereof
36	20010904	16	US 6284513 B1	Process for the production of stromelysin catalytic domain protein

37	20010320	33	US 6203794 B1	Modification of clostridial toxins for use as transport proteins

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	Issue Date	Pages	Document ID	Title
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4	20040122	25	US 20040014939 A1	Novel protease gene
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6	20030508	124	US 20030087807 A1	Methods for identifying compounds for motion sickness, vertigo and other disorders related to balance and the perception of gravity
7	20030403	171	US 20030065156 A1	Novel human genes and gene expression products I
8	20030227	41	US 20030040471 A1	Compositions isolated from skin cells and methods for their use
9	20030130	43	US 20030022835 A1	Compositions isolated from skin cells and methods for their use
10	20030109	23	US 20030008821 A1	Methods of preventing UVB-induced skin damage
11	20020404	45	US 20020040489 A1	Expressed sequences of arabidopsis thaliana
12	20041012	280	US 6803358 B1	Ricin-like toxin variants for treatment of cancer, viral or parasitic infections
13	20040914	26	US 6790649 B1	Composition, methods and reagents for the synthesis of a soluble form of human PHEX

	Issue Date	Pages	Document ID	Title
14	20040330	21	US 6712617 B2	Methods of preventing UVB-induced skin damage
15	20030715	336	US 6593132 B1	Ricin-like toxin variants for treatment of cancer, viral or parasitic infections
16	20030422	455	US 6551795 B1	Nucleic acid and amino acid sequences relating to pseudomonas aeruginosa for diagnostics and therapeutics
17	20030422	119	US 6551575 B1	Methods for identifying compounds for motion sickness, vertigo and other disorders related to balance and the perception of gravity
18	20010904	16	US 6284513 B1	Process for the production of stromelysin catalytic domain protein

	Issue Date	Pages	Document ID	Title
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3	20040722	123	US 20040142979 A1	Heteroarylsulfonylmethyl hydroxamic acids and amides and their use as protease inhibitors
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14	20030703	81	US 20030124706 A1	Proteases
15	20030703	61	US 20030124529 A1	Pregnancy-associated plasma protein-A2 (PAPP-A2)
16	20030612	206	US 20030109021 A1	Polynucleotide encoding a novel metalloprotease highly expressed in the testis, MMP-29
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24	20040224	137	US 6696449 B2	Sulfonyl aryl hydroxamates and their use as matrix metalloprotease inhibitors
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27	20040127	209	US 6683078 B2	Use of sulfonyl aryl or heteroaryl hydroxamic acids and derivatives thereof as aggrecanase inhibitors
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29	20021015	25	US 6465625 B1	Taxol derivatives
30	20020813	28	US 6432915 B1	Human mitochondrial chaperone protein
31	20001024	26	US 6136961 A	Biocatalytic methods for synthesizing and identifying biologically active compounds
32	20000104	29	US 6010879 A	Polynucleotides encoding human mitochondrial chaperone proteins
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	L #	Hits	Search Text
1	L1	243668	zinc
2	L2	70384	protease$2 or proteinase$2 or peptidase$2
3	L3	685681	clon$3 or express$3 or recombinant
4	L4	327	l1 adj2 l2
5	L5	38	l3 same l4
6	L6	1870	brain adj cancer
7	L7	0	l5 same l6
8	L8	18	human same l5
9	L9	34229	HILLMAN BANDMAN TANG AZIMZAI-YALDA BAUGHN YUE
10	L10	37	l4 and l9